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THE MILITARY STRENGTH OF THE POWERS

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by

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Translated by

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TRANSLATOR'S PREFACE

THE MANUSCRIPT OF this book was concluded by the author in December 1938.

When Hitler completed the first stage of the Munich Agreement by destroying the Czechoslovakian State altogether, the book was already in print.

However, what the Munich Agreement meant to Central and South-East Europe was already too clear for any knowledgeable and unbiassed observer to mistake, and the author did not share the naive hope of certain people in this country and France that the dismembered rump of Czechoslovakia could in any way play the important role in European affairs which was played up to last September by the free and independent Republic of Czechoslovakia.

With the signing of the Munich Agreement the last barrier between German imperialist expansion and South-East Europe was down, and the author speaks plainly of "the elimination of Czechoslovakia as a military factor." That was merely the first step. Her subsequent economic and political subjugation was a matter of time only. That subjugation has now taken the form of brutal and shameless aggression.

The development is a logical one, and though the form may shock, the fact should hardly surprise. It is important therefore to observe that the author's conclusions, based on his judgement of the Munich Agreement and its consequences, both direct and indirect, have not been invalidated in any important particular by Hitler's subsequent consummation of that agreement.

EDWARD FITZGERALD.

London,
March 17th, 1939.

CONTENTS

Chapter I. EUROPE IN ARMS

1 Armaments Influence Foreign Policy *page* 11
2 The Elements of War Potential 13
3 Time-Table Warfare 16
4 The Strength of the Military Powers 18
5 Volume and Types of Armament 22
6 Air and Tank Warfare 25
7 The Problem of Rapid Decision 30

II. THE MILITARY STRENGTH OF THE SOVIET UNION

1 The Red Army a Subject of Dispute 34
2 Latest Developments in the Red Army 36
3 War Economy, Technique and Equipment 44
4 Organisational Structure and Reserves 52
5 Military Training 57
6 The Officers' Corps 63
7 Weak Points in Soviet Military Strength 66
8 A Political Army 71

III. THE OFFENSIVE STRENGTH OF THE RED ARMY

1 The Red Air Force 74
2 A Ten-Thousand-Ton Bomb Salvo 82
3 The Strategy of Air Warfare 85
4 The Tank Corps 89
5 Red Cavalry 95
6 Artillery and Chemical Warfare 98

IV. RED STRATEGY

1 Territorial Conditions, Technique and Numbers 104
2 The Revolution in the Art of War 106
3 Realistic Strategy 112
4 Red Strategy Faces Westward 117
5 Poland no Barrier 119
6 The Fight for Hegemony in Eastern Europe 122
7 A Decision in the South-West? 130

Chapter V. THE MILITARY STRENGTH OF GERMANY

1 Numerical Strength and Technique page 134
2 The German Air Force 137
3 An Army of Concealed Effectives 144
4 Motorisation and the Tank Corps 146
5 Infantry Superiority 151

VI. THE WAR DOCTRINE OF NATIONAL SOCIALIST GERMANY

1 Totalitarian Warfare 155
2 The Strategy of Lightning Decision 159
3 A Strategy of Defective Endurance 163
4 German Strategy Ineffective against the Soviet Union 166

VII. GERMANY AND A WAR ON SEVERAL FRONTS

1 New Foreign Policy and New Strategy 169
2 The Consequences of the Schlieffen Plan 172
3 Fear of Russia 175
4 Military Concentration in the West 179
5 Dangers in the West 182
6 A New Deployment of Forces 183
7 Policy and Strategy on the Western Front 185
8 The Strategic Consequences of the Munich Agreement 188
9 1914–18—the Last of the Schlieffen Plan 195
10 What does German Strategy Hope For? 204

VIII. THE MILITARY STRENGTH OF FRANCE

1 The Present State of the French Army 207
2 Army Organisation 211
3 The French Air Force 213
4 Motorisation and the Tank Corps 220
5 The Strategic Position of France 225
6 The Spirit of French Strategy 229
7 Could France Launch an Offensive? 231

Chapter *IX.* THE CONSEQUENCES OF BRITISH REARMAMENT

1 British Armament Methods *page* 233
2 British Naval Armaments and Naval Strategy 235
3 Great Britain a Strong Air Power? 241
4 The Limitations of the British Army 244

X. ITALY AS A MILITARY FACTOR

1 The Economic Weakness of Italy's War Potential 249
2 Possibilities and Limitations of Italy's Air Force 251
3 The Low Offensive Strength of the Italian Army 253
4 The Struggle for Mediterranean Hegemony 255
5 A War against the Western Powers? 258

XI. THE RED ARMY AND THE GERMAN ARMY

1 Similarities 262
2 Which has the Stronger War Potential? 263
3 Armament Volume and Strategic Position 267
4 Weaknesses of the German Army 273

XII. THE RED ARMY IN A EUROPEAN DEFENSIVE COALITION

1 Re-alignment of Forces in the New Entente 279
2 Russia's Role and her Failure in the World War 279
3 The Red Army and the Collective Security Block 285
4 The Red Army and Eastern Europe 289
5 The Red Army and Western Europe 291
6 The Red Army and France 293
7 The Red Army and Great Britain 297
8 How Much are Alliances worth to the Red Army? 301

Chapter XIII. POLAND BETWEEN TWO CAMPS

1 Poland's Military Strength *page* 304

2 The Polish Army 305

3 Offensive Strategy without Resources 310

4 Poland and National Socialist Germany 313

5 The Lessons of the Russo–Polish War 316

6 Poland and a European Defensive Coalition 320

XIV. JAPAN AND THE SOVIET UNION

1 Japan as a Factor in a European War 324

2 The Limitations of Japanese Military Strength 325

3 Could Japan Launch an Offensive? 329

4 The Crisis in the Japanese Air Force 331

5 The Six-Year Army Reform 333

6 Japanese Military Strategy 334

7 The Red Army in the Far East 337

8 The Air Superiority of the Soviet Union 341

9 The Strategic Position of the Far Eastern Red Army 345

10 The Balance of the Sino–Japanese War 348

11 The German–Japanese Alliance Ineffective 352

XV. THE U.S.A., EUROPE AND THE PACIFIC

1 The U.S.A. 1914–38 355

2 The U.S.A. and the European Theatre of War 356

3 Japan against the U.S.A. 361

4 An Anti-Japanese Coalition in the Pacific 367

5 The Possibilities of a Russo–American Coalition 371

CHAPTER I

EUROPE IN ARMS

I. ARMAMENTS INFLUENCE FOREIGN POLICY

WHILST THE DIPLOMATS negotiate the machinery of war production is working at full blast. The European crisis has its military aspect, and it is a very important one. Armaments have reached such a pitch that they now represent one of the determining factors in the foreign policy of Europe. They are already exerting terrible pressure on European foreign policy, and forcing it in the direction of war. In the present crisis the importance of the European powers is determined by their strength; by their political and economic strength, and, above all, by their military strength. To-day the power of every European State is determined by its military strength. The one exception is Great Britain. Foreign policy is being more and more determined by military considerations; it is being increasingly reduced to military policy. In fact, its decisive problem, one might almost say the only problem which now concerns it, is that of military alliances. Military factors are advancing more and more into the forefront of European policy: Germany's armoured units, the Red Air Force, the Maginot Line, the British Navy. They form the basis of diplomatic calculations, and they are always present when coalitions and counter-coalitions are in process of formation. In 1932 the situation in Europe held the promise of a stabilisation of peace; since then it has been thrown out of joint by one military fact: German re-armament. The decisive question of European foreign politics to-day is also a military one: will the speed and volume of her re-armament permit National Socialist Germany to establish military hegemony in Central and Western Europe?

Thanks above all to the Munich Agreement European rearmament is now in full blast. In fact it is already nearing its completion. Very soon, at least in Germany and in the Soviet Union, it will have reached its highest possible point: the maximum of military equipment, saturation point, beyond which the freedom of movement and manœuvre would be hampered. The pressure being exerted to-day on foreign politics by the war preparations of the fascist powers is greater than the analogous pressure which existed in 1914, greater to the extent that armaments themselves are greater and military technique still more perfected. The full influence of the present armament race can be calculated on the basis of present-day armaments and on the basis of the changes in modern military technique which have taken place since 1914. The frontiers of Europe are no longer political and ethnological lines of demarcation; they are war fronts complete with powerful fortifications and developed into a broad basis of military operations. The weapons of modern warfare have already been tried out in the Italian war on Abyssinia, in the Spanish civil war and in the Sino-Japanese conflict; and in Abyssinia the air arm decided the war in Italy's favour. Modern warfare is no longer a vague vision of horror; its technique and its methods are already well known.

In 1932 the military situation greatly favoured the maintenance of peace and disarmament. Not a single army was prepared to conduct an offensive or was trained in the spirit of aggression. Both Great Britain and France had carried out a measure of disarmament which opened up new possibilities. The British Army had let its level of armaments sink very low indeed, and both the French Army and the Red Army had developed a very definite militia character. Of course, military technique in 1932 was on a higher level than in 1914, but nowhere was there any intention of increasing armaments. On the contrary, the intention was to reduce them still further, and military technique as a factor in military armament was almost at a standstill; the progress still being made was chiefly a laboratory matter, and its results were tried out in a few prototypes only. As long as Germany remained disarmed there was no reason for any armament race, and although military technique was more advanced than in 1914, no single European power possessed any plans for a strategic offensive, whereas in 1914 no less than three powers, Germany, France and Russia, had drawn up such war plans on a European scale.

Compared with 1939 European armaments in 1932 seem almost like a plaything both in quality and quantity. Between 1932 and 1939 lie the biggest revolution in military technique and the most violent armament race the world has ever seen. It is not merely a question of piling up armaments; armaments have developed quite a different character since 1914. The armament of a country to-day is based on the mobilisation of its entire war potential, a matter of which 1914 knew nothing.

2. THE ELEMENTS OF WAR POTENTIAL

The conception war potential is often misunderstood. The war potential of a country is composed of three elements: its reserves of man-power, its economic resources, and the extent to which both these have been militarised. These three elements belong to each other, and it is the combination of all three which determines the real military power of a country. Reserves of man-power alone are naturally not enough. Vast man-power can be given a military value only when it is coupled with an efficient economic system. The collapse of Russia during the World War demonstrated that a country which had vast man-power reserves but was economically weak was not capable of protracted military effort. The basis of war potential is economic potential: the economic possibility of waging modern warfare. A country's economic potential is greater than its industrial potential because the latter is only one of its constituent parts. Economic potential includes food and raw-material resources.

"Mechanised armies with a high degree of motorisation and using chemical weapons are far more dependent on raw-material supplies than were the armies of the World War." [1]

Germany, for instance, has a very powerful industrial potential, but nevertheless her economic potential as a whole is not satisfactory owing to her food-supply difficulties and the inadequacy of her industrial raw-material resources. Modern warfare demands enormous raw-material resources.

Where two countries have equally strong industries, the one with larger man-power reserves and superior raw-material resources has the stronger war potential and the greater staying-power in a protracted war. The development of industry in the Soviet Union gives her an advantage over Germany therefore because she has bigger man-power reserves and superior raw-material resources. In fact, the carrying out of the Five-Year Plans in the Soviet Union has completely altered the relation of military strength in Europe.

However, economic potential must under no circumstances be regarded as identical with war potential, because although it is true that a combination of man-power and economic resources determines in the last resort the possibilities of waging war, it does not necessarily determine the strength of a country in the decisive stages of a war. Readiness for war, both materially and morally, is also a factor of war potential. Modern warfare demands the biggest possible concentration of war material and of trained men at the very beginning of the war, and not merely during its course or perhaps towards its end, as was the case in the World War, when really powerful concentrations of artillery, and the mass use of aeroplanes began in 1917–18 only. In August 1914 the whole German Army of 100 Divisions had no more machine-guns than 5 German Divisions have to-day: approximately 2,500. Things have changed very considerably since 1914.

General von Metzsch, whom we have already quoted, writes:

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[1] General von Metzsch, writing on the tendencies of modern warfare in "*Wie wurde ein neuer Krieg aussehen?*" issued by the Inter-Parliamentary Union in Zurich in 1932, p. 34.

> "The permanent war preparedness of a country, and in particular those trained reserves and that war material which are immediately available, will be of decisive importance in these battles (on the outbreak of hostilies)." [1]

And Svietshin, one of the best brains of the Tsarist Army and now a prominent military theoretician of the Soviet Union, writes:

> "Modern weapons must be flung into the battle at once and in great numbers. They represent a force which must not be expended in driblets. In this sense there must be no 'economy' and no experiments in battle." [2]

In other words, the militarisation of the economic system and of all available man-power is to take place during the period of preparation for war and not during the course of the war itself. In this way the military strength of the powers has now become incomparably greater (even considered merely as quantity and quite apart from the advance of military technique) than it was in 1914, and the development of military strength to the full is therefore a matter for the pre-war period, in fact it is a decisive element of war potential. Modern war potential embraces the time element also. According to the greatest living French authority on military strategy, General Culmann, who is also an expert on war technique, during the World War it took six months before the simplest war material, for instance, shells, could be produced on a mass scale, and a whole year before artillery could be produced on a similar scale.[3] The mass production of aeroplanes in France began only in 1916, in the third year of the war. To-day, however, the prevailing theory demands that a war of annihilation shall be waged immediately with war material produced in peacetime, and the preliminary condition for any offensive strategy is the previous accumulation of an enormous amount of war material.

Militarisation in time of peace affects the economic system in two ways: it means first of all the creation of the biggest possible war industry, and secondly the preparation of industry as a whole and of the economic system in general for war mobilisation: the adaptation of the economic system to war production and war demands even in peace-time. The organisation necessary for complete war economy is already being built up to-day and held in readiness for the outbreak of war. As far as man-power is concerned, militarisation means the thorough training of the greatest possible number of military reserves, including in particular the highly-skilled men for the technical troops: the air force, the tank corps, etc. Unlike economic potential therefore, war potential is not determined merely by the possibility of developing military strength, but also by the degree of actual war preparedness. For instance, the industrial potential of the U.S.A. is enormous (about twice as strong as that of Germany or the Soviet Union), but her war preparedness as a land power is negligible: a weak war industry, industry as a whole very little prepared for war mobilisation, and very few trained reserves. Thus, the war potential of Germany or the Soviet Union is incomparably greater than that of the U.S.A. Further, the combined industrial potential of Great Britain and France is not less than that of Germany, but their combined war potential is less because they lag behind Germany in war preparedness, in the development of their war industries, in the preparedness of their industries as a whole for war mobilisation, and in the militarisation of their populations. Where industrial potentials are equal the country which is more prepared for war, whose war potential is more developed, has the advantage. Whoever wins the armament race may very well win the war. It is quite possible that an aggressor prepared for war would be able to defeat a country economically as strong as itself before the latter had time to develop its industrial power into war power.

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[1] General von Metzsch, "*Wie wurde ein neuer Krieg aussehen?*"

[2] Svietshin, "Strategy" (Russian), Moscow 1927, p. 70.

[3] General Culmann, "*Stratégie*", Paris 1924, p. 494.

3. TIME-TABLE WARFARE

The highest possible development of war potential is time-table war. This means the preparation of war to be launched suddenly on a day previously decided on. The aggressor country therefore accumulates the greatest possible reserves of raw materials, and the greatest possible amount of war material for the outbreak of war, and arranges for the mass production of war materials and for the war mobilisation of its industry as a whole. Thanks to its preparations for a definite time it will have a tremendous material advantage over its opponent both in quality and quantity. The aggressor country can begin with the mass production of the latest and best weapons of war, and it will begin hostilities not only with much more powerful armaments than its enemy, but also with a war industry already fully mobilised and ready to supply its war needs from the very beginning. The victim of its aggression, on the other hand, will have fewer armaments to begin with, and some time will elapse before it can organise its own war industry to supply its needs. From the very outset the victim will receive the full force of a blow from the maximum armaments of the enemy supported by the full capacity of his industry, which will already be mobilised for war purposes.

The theory of time-table warfare results from the demands of modern war technique. The latter did not exist in 1914, and therefore the method was unknown. "Modern warfare leads to the time-table war," declared General Debeney, the former Chief of the French General Staff,[1] who prophesied this method of war preparation by the German General Staff even at the beginning of 1933 before German re-armament was in full swing. The new factor in this method is that the aggressor launches the full power of his whole economic system, which has already been developed into war power, against his victim from the very beginning of the war. A French military writer [2] points out that this is a war manœuvre carried out with the whole economic strength of a nation, and that it renders possible surprises and unexpected attacks of an entirely new character. The full development of war potential in the next war will take place at the beginning of the war and not at the end, as was the case in the World War.

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[1] In an article in the "*Revue des Deux Mondes*", March 15th, 1933, p. 267.

[2] Lieutenant Ailleret, "*La Mobilisation industrielle*", in the "*Revue Militaire Française*", February 1936, p. 206.

The preparations for a time-table war intensify and accelerate the armament race, and thus modern war technique develops a tendency to precipitate war automatically, because, of course, this new method is known to all countries and cannot remain a German monopoly. On the contrary, it will become a principle of international military policy. The actual procedure will vary according to the strategic possibilities of the war potential which has been prepared: whilst National Socialist Germany is preparing for a time-table war of aggression, those powers which are interested in the maintenance of peace are preparing for a time-table war of defence: the Soviet Union is preparing a time-table counter-offensive, and Great Britain and France a time-table defensive.

4. THE STRENGTH OF THE MILITARY POWERS

The present politico-military situation in Europe is characterised by the appearance of new military powers. National Socialist Germany and the Soviet Union differ from the old military powers, Great Britain and France, in the manner of their armament and in the structure of their armies. Their military strength is based on a fully-developed war potential, on the highest possible level of war-technical capacity, and on a strategy of offensive. The military hegemony of the Versailles powers came to an end between 1930 and 1935. The greatest concentration of military strength, and the greatest volume of armaments, are not in Western Europe to-day, but in Central and Eastern Europe. The political aims of the two new military powers in their armaments differ from each other very considerably. Armament in itself does not necessarily mean warlike aggression. Military preparedness for an offensive is by no means identical with political aggression. A military offensive may very easily be a weapon of political defence. The armaments of the Soviet Union, unlike those of National Socialist Germany, are essentially defensive in their political aim. The Soviet Union was attacked by Poland in 1920, and since 1931 she has been repeatedly threatened by Japan, and since 1933 by Germany also. She has adopted politico-military measures of defence, and they are being carried out in the most active and efficient way possible.

The new military powers, Germany and the Soviet Union, have a threefold advantage over the old military powers, Great Britain and France:

First of all they have an advantage in both natural and material factors; they are the most populated countries in Europe and they each have a very strong industrial potential.

Secondly they have an advantage in time and quality with regard to industrial and war-technical equipment. Both Germany and the Soviet Union are profiting from the modern equipment of their industries, and in particular of their war industries. In all arms they are using only the most up-to-date models. One example will suffice: many of the artillery types still in use in France date from the 'nineties, whereas between 1932 and 1938 both Germany and the Soviet Union have introduced the most up-to-date artillery types throughout their armies. The very conception of new military power presupposes the latest technical progress in the art of war.

And finally both Germany and the Soviet Union have an advantage in the manner in which they can prepare for war: a tremendous volume of armaments, the preparation for totalitarian warfare waged with the full resources of the nation as a whole, and the full development of war potential.

Here we have the basis for the new military hierarchy in Europe.

At the head of all other military powers are the two economically strong countries which have at the same time the most highly developed war potentials: Germany and the Soviet Union. And of these two the Soviet Union will undoubtedly keep the upper hand because with an industrial potential as strong as Germany's she is superior in man-power reserves and raw-material resources, and she has in addition the advantage of time, because re-armament began sooner in the Soviet Union than in Germany. The Soviet Union has a fully developed, all-round war potential, and all its elements are equally strongly developed. She has the biggest reserves of man-power in Europe, and these reserves have been trained, for the most part, with modern war material; she has the biggest war-material resources in Europe, a powerful industry including a highly efficient war industry, and her economic system as a whole has already been widely prepared for war mobilisation. All these factors represent a unique combination of military power elements: natural and material factors, man-power and economic resources, all of which, thanks to their militarisation, are capable of a very high level of military performance.

In the second group of powers are those countries which are economically strong, but whose war potential is not fully developed: Great Britain and France. The characteristic feature of this group is a disproportion between a powerful economic potential and a relatively undeveloped war potential. The potential reserves of man-power and raw-material resources of these powers are very great, particularly when their colonial possessions are taken into account, and their industries are highly developed. However, as far as Great Britain is concerned the potential reserves of man-power have not been militarily tapped, whilst both in France and Great Britain the economic system has not been militarised.

In the third group of powers are those countries which are economically weak, but which are militarised to a very considerable degree: Italy and Japan. The latter country has become a factor in European politics owing to her alliance with Germany, and the structure of her war potential is more or less similar to that of Italy's. In both cases we find disproportion between a weak economic potential and a highly developed war potential, or exactly the opposite situation to that prevailing in Great Britain and France. The scarcity of raw-material resources and the weakness of industrial potential put very definite limits to any further development of the war potentials of Italy and Japan. The present military strength of both these countries is considerable, but in the event of war both would be threatened with rapid exhaustion. Thanks to an aggressive policy and to the fact that her military strength was ready for immediate use, Italy succeeded in warning off Great Britain when the latter showed herself inclined to interfere with Mussolini's Abyssinian campaign. However, in the long run the economically strong Western Powers must beat the economically weak military powers both in the armament race and in war. Both Great Britain and France can militarise themselves and increase their war potentials, whereas Italy and Japan cannot increase their economic power so easily. To-day, as in the World War, both Great Britain and France are capable of waging a protracted war and pursuing a strategy of attrition, whereas if Italy and Japan ever come into conflict with the economically strong powers they will not be able to stand a protracted war.

Finally the fourth group of powers consists of those Eastern European countries with a weak industrial potential and with medium-sized armies on the whole poorly equipped: Poland, Roumania and Yugoslavia. Their strong cards are: a comparatively favourable strategic situation in the event of a German or Italian attack (Roumania and Yugoslavia, but certainly not Poland); the high fighting qualities of the army (Yugoslavia); and the relatively big numerical strength of the army (Poland).

At the present stage of the European armament race two contrary tendencies are making themselves felt: the first is towards a levelling of strength as between the big powers, and the second is towards a widening of the difference in military strength as between the big powers and the backward and smaller countries. Great Britain and France are striving to reach Germany's level of armaments. Italy is striving to perfect her armaments. All the great powers are striving to equip their armies with the very latest weapons of war, and those powers which have not completed their armament plans are striving to catch up with the leading military

States. Germany's economic difficulties and her weakness with regard to foodstuffs and raw-material supplies may facilitate the attempts of the other big States to catch up with her. At the same time the preponderance of the big powers over the smaller powers is becoming greater. Modern war technique and the enormous volume of armaments with which it can be applied have resulted in much bigger differences in military strength than existed in 1914. In 1914 the only important difference between the best-equipped and the worst-equipped armies of the big European Powers (the German and the Russian respectively) was in the matter of artillery, and the relation of strength varied between 1·5:1 and 2:1 in Germany's favour. To-day, however, respective military strengths are no longer determined by the artillery park alone, but also by the more modern weapons of offence: the aeroplane and the tank. In this respect the differences are often tremendous. The relation of strength in modern weapons between the Red Army and the Polish Army, and between the Germany Army and the Roumanian Army are something like 10:1 in favour of the Red Army and the German Army. Under such circumstances there could hardly be a war at all, but, if hostilities did break out, the simple occupation of enemy territory by the overwhelmingly stronger powers. A strong military power to-day is both absolutely and relatively stronger than it would have been in 1914, and the corollary is true of the weak military powers.

5. VOLUME AND TYPES OF ARMAMENT

The pressure of existing armaments and of those in course of preparation on European foreign policy is enormous. The history of war offers us no historical basis on which we can judge present-day armaments. Armaments in 1939 cannot be compared with armaments in 1914 either in quality or quantity. To-day modern European armies possess between fifteen and twenty times as many machine-guns as they did in 1914, three times as much artillery, and a number of weapons of offence which were completely unknown then, such as chemical warfare, aeroplanes and tanks. Present-day armaments could be compared more easily with the level of armaments which had been reached by the end of the World War in November 1918, but even then the comparison would be a very limited one only, and it would have to be confined, for instance, to machine-gun and artillery strength. On the other hand, the number of tanks to-day is between eight and ten times as great as in 1918, and in addition there are many weapons which were quite unknown then, for instance the automatic cannon. And in quality there is very little possibility of comparison because the effectiveness of modern weapons has increased tremendously. Artillery range has almost doubled, and it must be remembered that artillery is a comparatively conservative arm. The tank of 1918 had a speed of between 3 and 4 miles an hour, and a radius of action of between 18 and 25 miles. In 1918 the aeroplane had a speed of between 75 and 100 miles an hour, and a radius of action between 150 and 180 miles. The tank of 1939 has a speed of between 30 and 35 miles an hour, and even more, and a radius of action up to 180 miles. The aeroplane of 1939 has a speed of between 250 and 300 miles an hour, and a radius of action of between 700 and 2,000 miles.

Apart from technical efficiency, the strategical efficiency of modern weapons of offence has increased tremendously. The big European armies of to-day have something like 25,000 aeroplanes, 30,000 tanks, 50,000 guns and 200,000 machine-guns, and thus even in peace time they have a fire-power and a degree of mobile striking force far beyond the possibilities of the armies of 1918 even when they were taxing their strength to the utmost and when their war potential was at its maximum. This applies to war potential as well as to armaments. The war industries of Europe to-day would be in a position to produce approximately as great a volume of war materials in the first months of a war as they were producing towards the end of 1918, but of incomparably great destructive power. At the moment it is quite impossible to calculate the full extent of war potential developed to the utmost pitch in a protracted war. It is impossible to calculate the maximum war production of a country like the Soviet Union with its huge resources of raw materials and its high industrial potential once its economic system has been completely militarised in a protracted war.

Technical progress in the art of war has also caused changes in the structure of armies, whilst the relation and tactical operative use of various types of weapons have changed. All the big European armies are now supplemented by independent air forces with their own operative tasks. The triumphal advance of the motor has altered the structure of armies. Mechanisation and motorisation have produced new military units. Mechanisation is the use of the motor as part of the weapon itself, as for instance with tanks, motorised artillery, etc. Motorisation is the use of mechanical transport for the movement of troops. Moto-mechanisation (an expression which has grown up in practice and been adopted in Soviet-Russian military literature) is a combination of mechanised weapons supplemented by motorised troops. These moto-mechanised units are already many and varied in their composition. There are tank squadrons accompanied only by motorised artillery, and there are the motor-mechanised units proper, organised in light and heavy Divisions according to their tasks and the type of tank used, in which the tank formations are supplemented by motorised infantry or cavalry, and there are also specially mobile Divisions in which the tanks are accompanied by motor-cycle units, cyclists or cavalry squadrons.

The motor has created paradoxical situations by its widespread use in connection with all arms: there are now cavalry squadrons without horses (motorised cavalry), and infantry which no longer marches but speeds along in motor vehicles faster than cavalry ever did. Modern infantry even flies, and in the Red Army there are whole Divisions of special air infantry and air expedition corps. Even this does not exhaust the catalogue of new departures in the art of war: in the World War artillery was a very cumbrous weapon, but to-day it is becoming mobile, and certain types are even being used to go forward with the infantry. General Debeney believes that the main principle of future warfare will lie in the amalgamation of all arms. This principle has already become law in the relations between infantry and artillery, and the German "*Militär-Wochenblatt*" writes: "Artillery fire is becoming more and more infanterised, and infantry fire is becoming more and more artillerised." Both statements are correct: artillery is being introduced into infantry formations to an increasing extent, and the infantry is sometimes supplied with artillery to such a degree that the infantryman tends to become an artillerist serving a piece of light mobile artillery.

This evolution of arms must affect the character of a future war. High mobility combined with fire-power is becoming the supreme law of war. The biggest changes have taken place with regard to the two decisive arms of the World War. The infantry is being provided with an increasing number of tanks organically attached to the infantry formations and tremendously increasing their fire-power and their striking force. The infantry is being provided with motorised transport which makes it the most mobile and rapid of arms, and it has its own light and mobile artillery. Artillery to-day is no longer the heavy weapon of positional warfare, whose cumbrous immovability contributed greatly to that rigidity of position which characterised the World War. Artillery is becoming mobile and varied in accordance with the new tasks it is given, for instance anti-aircraft and anti-tank units. With their increased fire-power both infantry and artillery are well suited to a war of movement aiming at a rapid decision.

6. AIR AND TANK WARFARE

Two weapons are in the forefront of the revolution in military technique: the aeroplane and the tank. The main weight of the offensive strength of modern armies lies in these two weapons.

During the World War the destructive power of the air arm was not very great, its technical capacity was low and its strategic importance was insignificant. It was not in a position to decide the issue in any battle or any operation. Owing to its small radius of action the effectiveness of the air arm was confined to the front line and the bases immediately behind it. Those attacks which were made on towns behind the enemy lines were on the whole ineffective. During 1918 37 German aeroplanes raided Paris and dropped about 15 tons of bombs, killing and wounding about 869 people.[1] 111 air attacks on British towns resulted in total casualties of 4,800 dead and wounded.[2] Since then the air arm has gone through a tremendous technical development, and every European country, with the one exception of the Soviet Union, can be bombed at any spot throughout its territory by the air forces of its enemies. Colonel von Bülow writes:

> "There is no single point in any country which could not be bombed in air raids from a neighbouring country." [3]

The modern aeroplane has a ballistic speed of between 300 and 500 feet per second, or more than the muzzle velocity of a mortar shell. Flying accuracy (blind flying and the overcoming of meteorological difficulties) and the increasing precision of bombing have caused German military experts to describe the modern aeroplane as "a long-range projectile vanquishing space". The destructive power of the air arm has increased tremendously since the World War. According to the calculations of Rougeron, a leading French expert, certain norms can be set up for the material destruction caused by bombing raids. Just over 100 lbs. of explosives are sufficient to destroy a factory, and bombing at the rate of 250 lbs. to the hectare [4] should put most industrial plants out of action. The closely built spaces of a big town offer considerably greater resistance, and in such cases from one to two tons of bombs per hectare must be dropped to secure complete devastation.[5]

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[1] Rougeron, "*Aviation de Bombardement*", Paris 1936, Vol. II, p. 197.

[2] General Fuller in the "Army Quarterly", 1935.

[3] Colonel von Bulow writing in the "*Militarwissenschaftliche Rundschau*", December 1936, p. 94.

[4] A hectare is 2·471 acres. Tr.

[5] Rougeron, "*Aviation de Bombardement*", Vol. II, pp. 198–200.

What is the strength and the potential destructive power of modern air forces? General Douhet, an Italian expert who regarded the air arm as the decisive weapon in modern warfare, assumed that 1,000 bombers would be sufficient to give the country possessing them air superiority over its enemies. General Groves, a British expert, declares that 500 bombers would be sufficient to throw the whole war production of Western Germany into utter confusion.

To-day Douhet's calculation is generally held to be too low. In view of the many and varied objects which an air force would seek to destroy in the event of war (industrial buildings, railways and railway junctions, oil depots, aerodromes, big towns, enemy lines of communication and the enemy forces themselves) it is unlikely that 1,000 bombers would be able to develop such tremendous destructive power. However, 1,000 bombers by no means represents the utmost limit for a modern air force, though at the beginning of 1937 the two Western Powers had not reached this figure. To-day French, German and Soviet-Russian military literature all consider air fleets of 10,000 aeroplanes to be a quite possible and even normal phenomenon, and in an air force of this size, between 3,000 and 4,000 machines would be bombers. Such an offensive air weapon would carry a total load of between 5,000 and 7,000 tons, the so-called bomb salvo, and perhaps more. Present-day European armaments are preparing for air warfare on a mass scale. As Rougeron points out, conquerors have never dispensed the decisive elements of their military power in careful doses, and it is not likely to be any different in the future. On the contrary, it is highly probable that the countries which have a strong air arm will seek to obtain the same advantages from it as the Mongols obtained from their horses, and the Normans from their warships.

The air arm of to-day can be regarded as a new weapon because it is capable of fighting performances and strategical effect impossible during the World War, and therefore the strategy of air warfare has become a matter of great importance. General Douhet's doctrine is rejected in Western

Europe to-day; not because it stresses the importance of the air arm, but because it preaches air warfare alone and denies the importance of land warfare. Much nearer reality, but still one-sided, is General Fuller's theory. He stresses the primary role of aircraft, but gives the army the task of carrying the basis of air operations further forward and defending it against enemy attack. Such an army would have to be very mobile, highly mechanised and capable of conducting an offensive, but its operations would do no more than supplement the decisive blow delivered by the air arm.[1] This theory of General Fuller's is particular interesting because he has always been the theoretician of mechanised warfare, so to speak the Douhet of the tank, which he considered would be the decisive weapon of modern warfare, whereas now he has come to the conclusion that the aeroplane and not the tank will play the decisive role.

At present tanks are being produced in even greater numbers than aeroplanes. During the World War the Western Powers had less tanks than aeroplanes, though the strategic effect of the tank was greater than that of the aeroplane. On August 8th, 1918, several hundred tanks—415 to be precise—broke through the German lines near Amiens in a battle which was the prelude to Germany's defeat. To-day that number would represent about the strength of one Tank Division, and hardly one-tenth of the total tank army of any of the big powers. The tank has now indisputably become the core of all big European armies; it gives them greater mobility and above all greater striking power. The German "*Militär-Wochenblatt*" declares that the chief practical problem facing the General Staffs of Europe to-day is how to organise big motorised units to the best possible advantage. The question of forming huge mechanical units, tank armies consisting of 10 Tank Divisions, with 5,000 tanks, and sending them into battle in co-ordination and the utmost concentration has been discussed since 1934. Lieutenant-Colonel Lançon writes as follows in the organ of the French

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[1] As set out in an article in the "Army, Navy and Air Force Gazette", September 1936, and in his book "The Army in My Time", London 1936.

General Staff concerning the possibilities of the tank in modern warfare:

> "If any power is in a position to put between 8 and 10 Mechanised Divisions into the field immediately on the outbreak of hostilities, it will develop a striking power which nothing in the present state of affairs would be able to stop. On this hypothesis, 'the beginning of the war' might very speedily lead to its end." [1]

In the meantime plans for the creation of huge tank armies, which would according to this prominent French expert, develop such tremendous striking power that they would overrun all obstacles, are being carried out by at least two countries: Germany and the Soviet Union. The ideas of the Austrian General Eimannsberger are being put into technical and strategical practice: 10 Tank Divisions as the core of a shock army. In the future the Tank Battle of Amiens will repeat itself in tenfold concentration.

The suggestion that modern weapons of offence, the tank and the aeroplane, have proved a failure in Spain is not correct. Compared with the strength of the big powers and the numbers in which they are likely to be used in the next war, they have been relatively little used in Spain, but even then they proved of decisive strategical importance. Franco's march to the gates of Madrid in September–November 1936 was possible at all thanks only to his superiority in the air, and the same is true of the taking of Bilbao and of the great March battle of 1938. Similarly, it was the air arm of the Republicans which won the battle of Guadalajara, and the Minister for National Defence in the Spanish Government, Indalecio Prieto, writes: "The Spanish Civil War has proved the supremacy of the air arm both in defence and offence." In November 1936 Madrid was defended by tanks. Without the support of the tanks there could have been no manœuvres of any importance by either of the belligerents.

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[1] In the "*Revue Militaire Française*", October 1935, p. 64.

7. THE PROBLEM OF RAPID DECISION

The preparations for the coming war will determine its character. We can already trace its main features in the structure of Europe's armies and in their accumulations of armaments. Questions concerning the course of the war, the rapidity of its development and the likelihood of a quick decision can already be answered to a certain extent by an examination of the way in which the war is being prepared. Important new factors suggest that the coming war will see a comparatively rapid decision. It is no objection to say that something of the sort was said in 1914 too: new military technique opens up new possibilities and demands new strategy.

In the beginning the World War was a war of movement waged with very modest material means, nevertheless both the Battle of the Marne and the Battle of Tannenberg were fought in its first phase. It was only in 1917 and 1918, towards the end of the war, and after the fronts had become rigid, that the fighting developed into a vast expenditure of war material on both sides. In a future war, on the other hand, the preliminary manœuvring will be carried out with enormous technical resources, and the first battles fought in this war of movement will be accompanied by a vast expenditure of war material. Modern military technique has resources which permit it to break up stabilised warfare, and General von Metzsch gives us the following graphic description:

> "The idea of positional warfare as it was fought on all fronts during the World War must be abandoned completely. Barbed wire is no longer an insurmountable obstacle. Land mines can be recognised before they become dangerous. Trenches fill up with falling gas. Improvised gas protection in dug-outs is of problematical value only. In short, there will not be much opportunity in future wars for the positional warfare of 1918, that is, in so far as the military technique and the chemical resources of the belligerent powers are fully developed." [1]

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[1] General von Metzsch, "*Die Entwicklungstendenzen des Krieges*", p. 31.

Further, a war of movement is rendered likely not only in a negative fashion by the facility with which obstacles and hindrances can be overcome, but also by the fact that the most powerful offensive weapons of modern warfare, the aeroplane and the tank, are weapons of mobile warfare, and this fact revolutionises military strategy. The main strategic thesis of our time is more or less: what would have been the upshot of this or that battle during the World War if modern motor-mechanised units, mechanical transport and the air arm had taken part in it? The revolution would have been complete. All the General Staffs of Europe, the German, the Soviet, the French, the Polish and even the British, expect and are preparing for mobile warfare. General von Metzsch writes:

> "Modern warfare will differ from the warfare of 1914–18. The cardinal principle of modern warfare will be the utmost mobility on land and in the air. Such warfare will aim at a sudden concentration of enormous strength at the point where a decision is sought. Battles resembling Tannenberg and Tolmein, and operations resembling the Roumanian and Serbian campaigns will be repeated, but the Battle of the Somme and the Flanders campaign will hardly occur again. One can say therefore that a modern war of movement is far more likely to obtain a decision than the positional battles of the last years of the World War accompanied by an enormous expenditure of war materials." [1]

General Allehaut, a prominent French military expert, also considers that the permanent trench warfare of 1914–18 was a special phenomenon unlikely to recur in the future.

The idea that the Spanish civil war has proved the inevitability of positional warfare and the impossibility of a war of movement is erroneous. The character of future warfare is not abstractly determined by the development of modern weapons. On the contrary, it will depend on two concrete circumstances: on the mass of modern weapons overwhelming the defence, and on territorial features. In Eastern Europe where there is no Maginot Line there are much greater possibilities for mobile warfare than in the West.

Mobile warfare, a war of manœuvre, must shorten the course of the war and intensify its operations. General Golovin, the Russian military historian, prophesied this in 1926:

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[1] General von Metzsch, "*Die Entwicklungstendenzen des Krieges*", p. 32.

> "Future warfare will be characterised by mobility. In a future war the phase of military manœuvring will last longer than it did in the World War, and it is very probable that before this phase has ended one of the combatants will have succeeded in compelling the enemy to sue for peace." [1]

Thus, the mobile stage of a future war is likely to last longer than the analogous stage of the World War, and in all probability the war itself will be decided in this stage. The well-known theoretician of tank warfare, the Austrian General Eimannsberger, even ventures to estimate the probable length of the various phases of a future war:

> "If we cared to estimate the probable duration of a new war in Europe, we might say that it could hardly enter into its decisive stage in the first 6 months, and that then it could hardly last much longer than another 6 months. Throughout the whole war there might be three distinct battle phases: after the lapse of 6 months, after 10 months, and finally after the first year." [2]

All the leading military experts of our day are agreed that the character of future warfare will be determined by the elements of speed and surprise, mobility and manœuvre. After a German, a Russian and an Austria, let us now hear a Pole and a Frenchman.

General Sikorski writes:

> "Modern warfare will consist of unexpected and severe crises which will bring about the defeat of one of the belligerent parties." [3]

The French expert Sozey writes:

> "There will be no Battle of the Marne for those struck down unexpectedly." [4]

However, the mobile character of future warfare is not determined by modern military technique alone, and Svietshin writes:

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[1] General N. Golovin, "The 1914 Campaign on the Russian Front" (Russian), Prague 1926, pp. 1–2.

[2] General Eimannsberger, "*Der Kampfwagen-Krieg*", Munich 1934, p. 215.

[3] General Sikorski, "*La guerre moderne*", Paris 1935.

[4] Sozey, "*La guerre des vitesses*", Paris 1935.

"All the countries of Central Europe, Germany, Poland, Czechoslovakia, etc., find themselves in circumstances which render ordinary defensive and positional warfare impossible." [1]

He might have gone into greater detail and pointed out that all the countries of Central, Eastern and South-Eastern Europe are placed in such circumstances by the demarcation of their frontiers and by the peculiarity of the theatre of war itself. In the West fighting before the Maginot Line might well retard the speed of mobile warfare, but in Eastern and Central Europe, between the Pripet and the Elbe, between the Duna and the Oder, there are no Maginot Lines. In this huge area mobile warfare can develop without hindrance and with the support of modern military technique, which makes for mobility, and in territory most suitable to it. This time Russia, the Soviet Union, has the strongest war potential, the most mobile army, and the most powerful offensive weapons. Modern military technique operating in the territorial conditions of Eastern Europe will necessarily give special impetus to the war of movement on the future Eastern Front, and at the same time greatly accelerate a decision in the European War as a whole.

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[1] Svietshin, "Strategy" (Russian), Moscow 1937, p. 184.

CHAPTER II

THE MILITARY STRENGTH OF THE SOVIET UNION

I. THE RED ARMY A SUBJECT OF DISPUTE

"THE MILITARY STRENGTH of the Soviet Union represents a factor of decisive importance in the power relations of Europe."

Thus the "*Revue des Deux Mondes*", one of the leading conservative publications in France, which numbers amongst its military contributors Marshal Pétain, General Weygand and the former Chief of the French General Staff, General Debeney.

The existence of Russian military strength of such importance represents an entirely new factor in the European situation. National Socialist Germany is merely winning back the old position of Hohenzollern Germany before the World War, but Russia is advancing to a front place amongst the military powers of Europe for the first time in history.

We must study the dispute which has been going on in Western Europe for some time now concerning the fighting value of the Red Army if we are to understand anything of the latter's unique character. Three circumstances make it difficult to form an objective judgement on the Red Army: plain ignorance, conservatism in thought and simple prejudice. As a result the military experts of Europe and their professional journals are not keeping abreast of Soviet military developments, and even their information is often old. In 1937–38 the European Press was publishing figures about Soviet armaments which referred for the most part to the beginning of 1935. Here we have a clear case of conservatism in thought finding itself incapable of keeping up with the rapid development of modern military science.

The Italian General Visconti-Prasca writes:

> "The unexpectedly rapid development of military technical resources has outstripped the military doctrines of many armies, and their theoreticians still cling to antiquated ideas." [1]

When military experts and politicians underestimate the strength of the Red Army they are merely demonstrating their own backwardness in modern military matters. There is also another factor which hampers the formation of an objective judgement on the Red Army, and that is the association of ideas concerning the old Russian Army, or the Red Army of the civil-war period, with the Red Army of to-day. However, the Red Army of to-day exists in an entirely new military epoch, and it has very few points of contact even with the Red Army as it existed in 1929, before the carrying out of the first Five-Year Plan. Since then the Red Army has developed in a period of permanent technical revolution.

One might say that since then the Red Army has developed into an essentially new type of army almost every two years. Whoever fails to realise this rate of progress must necessarily draw wrong conclusions. The commonest error still prevalent concerning the Red Army is that it is suitable for defensive purposes only, whereas in fact almost the whole volume of technical progress made in the Red Army since 1928 (and it has been enormous) has aimed at creating a modern war technique which would permit the development of an initial war of defence into a powerful counter-offensive against the aggressor.

Such prejudices and misunderstandings are gradually being recognised and abandoned, because the facts themselves are too eloquent and convincing. At the beginning of 1935 the French deputy Archimbaud, Reporter on the Military Budget, argued in the Chamber that the Red Army was strong only as a defensive weapon, and that therefore the military assistance the Soviet Union could give France under the Franco-Soviet Pact would not be very great. However, the military and political value of a coalition partner necessarily depends on the ability of his army to wage offensive warfare. Later on Archimbaud, himself one of the most influential parliamentary military experts in France, found cause to revise his judgement, and speaking in the Chamber on June 23rd, 1936, he declared:

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[1] General Visconti-Prasca, "*La guerre décisive*", Paris 1935, p. 20.

> "I have changed my opinion about the Red Army, and I am now convinced that the Soviet Union will be in a position to honour all her undertakings under the Pact." [1]

The facts demonstrate that the Red Army has bigger reserves of man-power than any other army in Europe, the biggest volume of armaments and the most powerful offensive weapons. At the same time it has been uniformly trained to wage a strategic offensive. Together with the German Army it is one of the most modern amongst European armies.

2. LATEST DEVELOPMENTS IN THE RED ARMY

The rapid advance of the Red Army in military technique begins with the period of accelerated industrialisation in the Soviet Union—around 1930. Far-reaching militarisation and the training of a mass army with mass reserves are of a much earlier date than the technical modernisation of the army. In former years there was all-round militarisation, but on the basis of a comparatively backward military technique. During a lecture delivered in February 1933, Voroshilov described the condition of the Red Army prior to its technical modernisation as follows:

> "As a result of the work performed in the years 1924–28 the Red Army was given a strong modern structure. Its supply of effectives was thoroughly organised, the periods of service laid down, and modern Field Service Regulations introduced. The rank and file were thoroughly trained, the officers corps reorganised, and a network of military training schools and academies set up. By 1928 the Red Army had developed from an organisationally backward army into a modern army incorporating in its organisation and training all the lessons of the World War." [2]

The time referred to by Voroshilov may be taken as the basis of that period of development which began with the rapid industrialisation of the country. It is interesting to observe that a bitter enemy of the Red Army, the White-Russian emigrant Colonel Piatnitzki, expresses the same opinion as Voroshilov concerning the condition of the Red Army prior to its technical modernisation:

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[1] "*Journal Officiel* 1936", p. 1561.

[2] K. Voroshilov, "15 Years of the Red Army" (Russian), Moscow 1933.

> "The Red Army has excellent Field Service and Training Regulations, a good and completely modern organisation, a comparatively high degree of technical resources, an excellent and progressive theory of warfare, and, finally, the splendid Russian soldier." [1]

That is to say that even at the beginning of its rise to the front ranks the Red Army represented no mean military strength.

Two years later, at the beginning of 1933, the Red Army had already developed into an essentially different type of army. In 1933 it already had modern equipment. Technical progress was introduced by general re-equipment. In the lecture from which we have previously quoted Voroshilov deals as follows with this point (referring in particular to the artillery):

> "We have modernised our whole artillery park, and brought it up to the level of foreign armies by increasing the number of howitzers. For the first time in our country we have created our own heavy artillery. We have organised and carried out the production of our own anti-aircraft, anti-tank and tank guns. And finally, we have created our own small-calibre artillery, which is so necessary to-day for smaller infantry units."

The Red Army was then rapidly motorised on an all-round scale, and numerous tank formations were organised. On August 4th, 1931, the Polish military organ "*Polska Zbroina*" wrote:

> "Since 1929 the Red Army has been in process of motorisation and mechanisation as a result of the Five-Year Plan and the increase in war production. One must compliment the Bolshevists on the thorough fashion in which they are carrying through the motorisation and mechanisation of the Red Army, and on the determined efforts they are making in this direction."

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[1] Colonel Piatnitzki, "The Red Army of the Soviet Union" (Russian), Paris 1931, pp. 57–8.

And in 1932 the Japanese naval attaché Maede wrote as follows in "*Yessu*", the organ of the Japanese Admiralty:

> "It is not merely the great number of tanks which is important, but the fact that an enormous number of them are of the most modern type. The mechanisation of the Red Army astonishes all the foreign attachés who are present at its parades."

At the same time a powerful air force with an equally powerful production basis was being created, and when the French Air Minister, Pierre Cot (declared by the German "*Militär-Wochenblatt*" to be "an acknowledged expert" [1]), visited Moscow in the late summer of 1933 on a special mission (during which he was given every opportunity of examining the state of the Soviet-Russian air arm), he came to the conclusion that it was at least equal to the French in strength (which was at that time generally considered the best in Europe) and in many respects superior to it. According to statements made by Pierre Cot later,[2] even at that time the superiority of the Soviet air arm, numerically, in the technical equipment of its machines, and, above all, in the productive capacity of its aero-industry was already evident.

Thus at the end of 1932 the Soviet Union had already reached the level of Western Europe in the matter of armaments. Even at that time the Red Army approached the level of the French Army (then the finest in Europe), and competent French military experts were already recognising that the military strength of the Soviet Union made it a worthy partner in a Franco-Soviet alliance. Thus at the very beginning of its modernisation the Red Army could claim to be the strongest military power in Europe, though in view of the standstill in armament development which characterised the European armies of the time this was not so very extraordinary.

The next stage of development, 1933–34, then followed, and armaments progressed. From 1933 to 1934 the military budget of the Soviet Union increased from 1.5 to 5 milliard roubles, and budgetary expenditure on armaments can serve up to a point as a more or less reliable measure of armament level. Writing in the conservative "*Temps*" in the first half of 1934 General Baratier declares:

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[1] The "*Militär-Wochenblatt*", May 11th, 1935.

[2] An article by Pierre Cot in a special number of "*Vu*", July 10th, 1935, pp. 936–7.

> "In the event of mobilisation the Red Army will prove a powerful weapon for victory. The Red Army possesses an even greater number of mechanised weapons than the best armies in Europe." [1]

The following phenomena of growth characterise this period: In 1934 the standing army was increased from 562,000 to 900,000 men. The army as a whole was developing a more and more industrialised character, and at the beginning of 1934 Voroshilov declared that 50% of its effectives consisted of "technical specialists of various degrees" serving machinery and mechanised weapons, not including machine-gunners. The Red Army had by that time an enormous motor-transport park totalling over 10 million H.P. at the beginning of 1935. For this period there are official statements concerning the progress of Soviet armaments, i.e., the information publicly placed before the VII Soviet Congress in January 1935. According to these figures armaments had increased by the following percentages since 1931: the air arm 330, tankettes 2,500, heavy and medium tanks 750, machine-guns 200, machine-guns for tanks and aeroplanes 700, tank and anti-tank guns 450, heavy artillery 200. What absolute figures are behind these percentages? As far as the Soviet Air Force is concerned, French, German and Swedish experts give more or less identical figures: between 4,000 and 5,000 first-line aeroplanes at the beginning of 1935. These figures were published by Colonel von Bülow in the official organ of the German War Ministry, of the "*Militärische Rundschau*", in the "*Deutsche Rundschau*" of April 1935, in a joint work on the Red Army drawn up and published by Swedish military experts, and in the French Press. These figures can be considered as a minimum, for on May 1st, 1935, no less than 3,000 military aeroplanes took part in air parades in 6 big towns in the Soviet Union in connection with May-Day celebrations.

J. Watyn-Watyniecki writes as follows in a Polish military organ concerning the progress being made by the tank arm of the Red Army:

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[1] General Baratier in an article in the "*Temps*" on March 25th, 1934.

> "The rapidity with which the Department for Mechanisation and Motorisation in the Red Army makes its decisions with regard to the introduction of new tank types, and the equally great rapidity with which such decisions are then put into operation, i.e., the 'elasticity' of Soviet Russia's present-day war industries in the matter of tank production, are very noteworthy indeed. The result of this is that to-day the Red Army is stronger in motorisation and mechanisation than any other army in Europe." [1]

In the first half of 1935 Major-General Guderian, who is now commanding the German Tank Corps, put the number of tanks in the Red Army at 10,000.

This estimate is quite in accordance with the official Soviet statement concerning the percentage growth of the tank weapon in the Red Army, and with the norms which were accepted at the time for the use of the tank in modern warfare.

Thus, even at the beginning of 1935 the Red Army took first place amongst the armies of Europe in the question of armament volume, and, above all, in the matter of modern weapons of offence. Two years previously the Soviet Union had caught up with France, now France was outstripped, and not only numerically. During a journey of investigation made in 1934 Henri de Kerillis, himself an experienced war pilot and the leading journalistic representative of the French Right Wing, declared that in numerical strength, technical efficiency, modern equipment and flying ability the Red air arm was considerably superior to the French. It is quite clear that in the concentrated and feverish period of rearmament experienced by National Socialist Germany up to the beginning of 1935 there was no possibility whatever of her nullifying the enormous start of the Red Army in point of time, technical progress and armament volume. Even at that time the Red Army had a good chance of maintaining the military leadership of Europe.

And now we come to the third and decisive stage, 1935–38.

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[1] J. Watyn-Watyniecki, "Tank Development in the Red Army", *Przeglod Woiskowo Techniczny*", 1934, No. 6.

In order to recognise the structure and the military value of the Red Army we must examine its strength after the latest armament achievements. All other figures, even those of early 1936, have since been rendered valueless both in quality and quantity. The growth of military expenditure in the Soviet budget since 1933 offers us a useful measure of achievement:

1933	1·5	milliard	roubles
1934	5	,,	,,
1935	8	,,	,,
1936	14·8	,,	,,
1937	22·4	,,	,,
1938	34	,,	,,

The military expenditure for 1937 consisted of 20·1 milliard roubles for the People's Commissariat of Defence and 2·3 milliard roubles for the newly formed People's Commissariat for the War Industries, amounting together to 23% of the total Soviet State Budget, and the corresponding figures for 1938 were 27 milliard roubles and 7 milliard roubles. The State Budget of the Soviet Union is differently constructed from the budgets of ordinary countries. As almost the whole of the economic system is in the hands of the State, the greater part of the national income goes through the State Budget. A certain amount of direct and indirect military expenditure is not included in the sums mentioned; for instance, the expenditure for frontier defence, which appears in the budget of the People's Commissariat of the Interior, and sums expended on the building of strategic railways and roads, and on certain supplies. The increase of expenditure on armaments in the Soviet Union in recent years has thus been enormous; between 1933 and 1938 it increased twenty-two-fold. In the four years 1931–34 a total sum of 9 milliard roubles was expended for military purposes, whilst in the four years 1935–38 a total sum of 79 milliard roubles was expended for the same purpose, or a ninefold increase. What does this enormous expenditure represent in military strength?

First of all there is the numerical increase in the strength of the standing army from 940,000 in 1935 to 1,300,000. This increase in strength was connected with the change in the structure of the Red Army. Formerly, 74% of the Infantry Divisions were of a territorial character and their ranks were formed of short-service men, so that only a minority of the army actually served a two-year period of training. Since 1935 the proportion has been reversed: to-day 77% of all Infantry Divisions are long-service formations, and only 23% are on a territorial basis. This change naturally means that military training in the Soviet Union has been greatly intensified. The numerical strength of the long-service troops has been increased almost threefold, and the Red Army has become a mass army of thoroughly trained soldiers. For the great majority of Soviet infantrymen the term of service has increased two-and-a-half times.

It is clear, too, that in the same period the volume of armaments at the disposal of the Red Army must have grown very considerably, though the enormous increase in military expenditure indicates that the progress in war technique, etc., has been even greater than the increase in army effectives. Thus the intensification in armaments must have been continued rapidly. Not only did the effectives increase, therefore, but the volume of military equipment and technical resources per 1,000 bayonets must have increased too. The increase in the number of effectives in this period must have required an increase in the volume of armaments of between 35 and 40%. Over and above this, however, there has been a supplementary addition in the volume of technical resources. We may assume that in the years 1935–38 the Red Army doubled the number of modern weapons of offence at its disposal, and that in 1937–38 it had between 15,000 and 20,000 tanks and over 10,000 aeroplanes. Colonel von Bulow [1] assumed in 1935 that in the next few years the Red Air Force would have a strength of 10,000 machines, and he declared that the armaments programme of the Soviet Union was to be completed in 1937. For the beginning of 1939 we may assume that the Red Army will strive to reach the highest known norms of armament, and we may also assume that it will succeed in all modern weapons of offence.

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[1] Colonel von Bulow, "*Grundlagen der neuzeitlichen Luftstreitkrafte*", in the "*Militär-Wochenblatt*", December 1935, pp. 96–107.

The enormous volume of military expenditure in the Soviet Union indicates that there are still other directions in which money is flowing, namely, apart from the increase in military effectives and the intensification of armaments, the accumulation of military supplies. In a very thorough and objective examination of the military strength of the Soviet Union Dr. Erwin Haudann writes as follows:

> "Another means to bridge the transitional period and satisfy the enormously increased demands of the first months of war, is the accumulation of weapons, supplies and reserves of every possible kind, and this is being done on a wide scale in the Soviet Union." [1]

There is no doubt whatever that the Soviet Union will be in a position to equip whatever new troops she may raise, and she already possesses sufficient supplies to equip an army at full war strength. The whole recent development in the Red Army indicates clearly that its leaders reckon with an enemy attack in the near future, and Germany's preparations for a time-table war of offence are being countered with thorough preparations for a time-table war of counter-offensive.

The military achievement of the Soviet Union in the years 1935–38 culminated in the formation of a powerful mobile shock army on its Western frontier, an army capable of delivering a rapid counter-blow. This army is the strategical incorporation of all modern military technique and it represents a unique concentration of modern weapons of offence. The official report on military affairs placed before the Central Executive Committee of the Soviet Union in January 1936 has been widely quoted in the European Press; nevertheless, the following significant passage has received too little attention:

> "Together with a complete transition to the system of strengthening our cadres, we have also strengthened the defence of our frontiers by a supplementary development of our mechanised

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[1] Dr. E. Haudann, "*Das Motorisierungspotential der Sowjet-Union*", Hamburg 1937, p. 123.

units and cavalry forces. It is well known that these mechanised units and the cavalry are distinguished by a particularly high level of fighting morale, and by their ability to manœuvre with the utmost determination and rapidity. It may also be added that our infantry units, mechanised units and cavalry forces are now all considerably more mobile from the standpoint of defence than ever before. Together with the tremendous development of the air arm all this creates unique operative possibilities." [1]

At the beginning of 1938 the Red Army had far outstripped the armies of the Western powers in numerical strength, in technical resources and in war preparedness. The German Army was certainly not then in a position to equal the armament level of the Red Army, though it certainly ranked second after the Red Army in the hierarchy of European military powers, and it is now doing its utmost to obtain the lead.

3. WAR ECONOMY, TECHNIQUE AND EQUIPMENT

The military strength of any country is determined by the capacities of its war economy on the one hand, and by the number and quality of its military cadres on the other. The chain is formed as follows: war economy—military technique—armaments—military organisation—military training.

It may appear to be a miracle that the technically-backward and cumbrous army of Tsarist Russia has now been replaced by the technically most advanced and most mobile army in Europe, and that the Soviet Union probably possesses the strongest army in Europe at the moment, but the miracle is not greater than the achievements of the Five-Year Plans, or the industrialisation of military technique and military science. The military strength of the Soviet Union is based on her natural resources, on her tremendous reserves of man-power, and on the strength of her new industrial system. There is nothing really miraculous or unexplainable, or even unexpected, in the rise of the Red Army; and an examination of its elements and of the conditions under which it took place will quickly make it understandable.

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[1] In "*Kraznaya Svesda*", the official organ of the People's Commissariat for Defence, January 16th, 1936.

Thanks to the successful carrying out of the First Five-Year Plan the Soviet Union has taken a place amongst the big industrial powers of the world. The volume of industrial production in the Soviet Union in 1938 gave her first place in Europe and second place in the world. The structure of the Soviet industrial system is particularly favourable to the development of powerful war industries, whose two main pillars are a highly-developed heavy-industrial production and a highly-efficient engineering industry. The production of heavy industry in the Soviet Union in 1938 was five times as great as heavy industrial production in Tsarist Russia before the World War, and in the same year Soviet engineering production was no less than fifteen times as great as pre-war production in Tsarist Russia. In 1938 the Soviet Union occupied first place in Europe in the production of oil, aeroplanes, lorries, tractors, locomotives and railway rolling stock, and second place in the production of steel and pig iron (in which Germany holds a slight lead), aluminium, lead, nickel and coke. Lorries and tractors (tanks at need) are the two standard articles for the motorisation and mechanisation of the army, and production possibilities in this respect are already visible.

In the last resort the strength of any army is determined by the economic war potential behind it. In 1933 M. Caquot, the Director of the Technical Department of the French Air Ministry, and a member of the French Academy of Science, was given the task of calculating the industrial potential of the Soviet Union. He came to the conclusion that by 1936 it would be twice as strong as Germany's and four times as strong as that of Great Britain and France.[1] M. Caquot over-estimated the actual rate of progress, but his judgement of the direction and dynamics of development was correct. However, economic statistics alone are not enough to measure the strength of Soviet war economy. One of the main tasks even of the First Five-Year Plan was to build up the strongest possible war industries, and to construct industry as a whole in such a fashion that in a state of emergency it could be rapidly adapted to the requirements of economic war mobilisation. The first task was to create the economic conditions necessary for large-scale armaments.

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[1] According to the information of Pierre Cot in an article on the Red Air Force in "*Vu*", July 10th, 1935, pp. 935–6.

Speaking to the XVI Party Congress in the summer of 1930 Voroshilov declared:

> "The basis for the arming of our country lies in the accelerated development of our economic system, in the increase of metallurgical production, in the development of our chemical industries, in the production of motor-cars and tractors, and in general in the development of our engineering industries."

Two years earlier, in 1928, the leading Soviet economic organ wrote as follows:

> "In drawing up our five-year economic plan we must pay great attention to the rapid development of those branches of our economic system in general and of our war industries in particular which will play the main role in consolidating the defensive powers of our country and ensure economic stability in time of war. Industrialisation also means the development of our war industries." [1]

And on August 18th, 1937, the Berlin "*Börsen-Zeitung*", which is regarded as the mouthpiece of the German War Ministry, wrote:

> "Soviet Russia's economic policy is guided almost exclusively by military considerations. . . . The real aims of the economic five-year plans lie chiefly in the satisfaction of military demands in peace-time, and in the preparation of industry as a whole to cope with greatly increased military requirements in war-time."

Preparations have already been made in the Soviet Union for a rapid and all-embracing mobilisation of industry in the event of war. The centralised plan-economy which exists in the Soviet Union offers a guarantee that when the time comes this task will be performed without difficulty. Colonel von Belli writes as follows in the organ of the German War Ministry:

> "Measures to ensure industrial mobilisation for war are greatly facilitated if there is already strict government control in peace-time. This is true above all of Soviet Russia." [2]

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[1] "*Ekonomitcheskoia Obosrenie*", Vol. II, 1928, an article by Ventzov (at present Soviet military attaché in Paris) and Gayevski.

[2] Colonel von Belli, "*Das Volk in Waffen*", "*Militärwissenschaftliche Rundschau*", December 1935, p. 29.

The well-known German newspaper correspondent, A. Just, a very keen observer, is of the same opinion:

> "The transition from peace to war will probably be easier for the Soviet Union than for any other country in the world." [1]

In addition to the organisational capacity to create an effective and powerful system of war economy, the Soviet Union has two other advantages: firstly the possession of all the material requirements for placing industry on a war footing, thanks to inexhaustible raw-material resources of all kinds, and secondly invulnerability in the air, thanks to the enormous distances involved, and this will permit mobilisation to take place undisturbed by enemy attack. Both these factors are important, and in these respects the Soviet Union is in a more favoured position than any other European country. There is no single raw material of importance for war production which the Soviet Union does not possess. Economic self-sufficiency is not a theory in the Soviet Union and not even a future aim, but a naturally given and technically realised fact. The self-sufficiency of the Soviet Union is greater even than that of the United States, which has to import rubber, nickel, manganese ore and chromite, whereas the Soviet Union has these three ores in abundance and has already successfully organised the production of synthetic rubber. In 1936 the production of synthetic rubber in the Soviet Union satisfied 56% of her requirements. "The problem has been solved both theoretically and practically," writes the German "*Militär-Wochenblatt*", with a sigh of envy. However, the chief factor which makes the war economy of the Soviet Union so extraordinarily powerful is the possession of oil in abundance, because oil is the fuel of all modern weapons of offence, the aeroplane, the tank and motorised transport. The recognised theoretician of the tank and of motorisation, General Eimannsberger, writes: "A stream, no, a river of oil must flow constantly into the country which wages modern warfare." [2] The Soviet Union is the only big European power which possesses oil in such abundance.

The war industries of the Soviet Union are already supplying mass armies with the highest norms of technical equipment, and their production is capable of extension, because for a long time now the whole economic system has been placed in a state of preparedness for rapid war mobilisation. One or two concrete examples will indicate war-production possibilities.

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[1] A. Just, "*Militärmacht Sowjet-Union*", Breslau 1935, pp. 16–17.

[2] Eimannsberger, "*Kampfwagen-Krieg*", Munich 1934, p. 215.

Members of the French Air Mission which visited the Soviet Union in the summer of 1936, accompanied by leading political experts of the Air Commission of the French Chamber of Deputies, and by many prominent technical experts and industrialists, put the production of the biggest Soviet air factories at 5,000 machines annually. The well-known French aeroplane constructor Louis Bréguet even declared that the Soviet Union was producing twenty times as many aeroplanes, motors and spare parts as France.

Another very important element of modern military technique is army motorisation. According to official figures published in 1937, every soldier of the Red Army is backed by 12 H.P. in mechanism. That is to say, the whole motorised park of the Red Army, including motorisation and mechanisation, amounts to about 15 million H.P. The tractors at work in Soviet Russian agriculture have a total H.P. of 7 millions, and machinery of all kinds at work in Soviet agriculture has a total of 19 million H.P., and it must be remembered that Soviet agriculture is very highly mechanised. The machinery park of Soviet agriculture forms the basis of the collective system and of the whole of agricultural production; nevertheless the mechanisation and motorisation of the Red Army are not far short of it in total H.P. From this we may judge the size of the war-industry sector in the total engineering industry of the Soviet Union.

The German General Guderian, who is recognised as one of the foremost authorities on motorisation, writes as follows concerning the Red Army:

> "10,000 tanks, 150,000 tractors and over 100,000 other military motor-transport vehicles place the Red Army at the head of all other armies. Great Britain and France have been left far behind." [1]

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[1] General Guderian in the "*Militärwissenschaftliche Rundschau*", December 1935, p. 72.

These figures refer, however, to the first half of 1935, and since that time mechanisation and motorisation in the Red Army have increased by about one-third, so that Guderian's figures must be corrected accordingly. A heavy-artillery tractor has a 60 to 90 H.P. motor, a medium military lorry one of about 50 H.P., and a medium tank between 150 and 250 H.P. A Motorised Division employing no horse traction at all needs between 2,000 and 2,500 motor vehicles of various kinds. Thus the big motor park of the Red Army is sufficient to permit the formation of a powerful moto-mechanised first-line army, the motorisation of a third of the infantry and of the greater part of the artillery, and in addition widespread motorisation throughout the whole basis of operations in the rear. If the productive capacity of the Soviet tractor industry is taken into consideration it becomes clear that the possibilities of motorisation in the Red Army are practically unlimited.

What is the position of the Soviet war industries with regard to quality? Referring to Haudann's admirable and expert work from which we have already quoted, the "*Börsen-Zeitung*" writes:

> "Those defects and weaknesses of the Russian economic system as a whole do not apply in the same degree to the war industries. Nothing but first-class material, well-trained and high-skilled workers, and technically highly-developed industrial resources are ever used to satisfy military requirements. That is to say, the Red Army and its economic basis are largely independent of normal economic life as a whole, and they are governed by quite different conditions. The performance of the war industries is therefore very considerably superior to that of the industries working to supply civilian needs."[1]

The aero-industry is regarded to-day as typical of the condition and quality of military technique. It demands the highest degree of precision and the ability to master a highly-complicated process of production. And Pierre Cot writes:

> "The aero-industry is the test. If a country can succeed in building a big air fleet with first-class technical equipment, then it may be said to have successfully passed through the most important stage of military and industrial organisation."[2]

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[1] The "*Börsen-Zeitung*", Berlin, August 18th, 1937.

[2] Pierre Cot in an article published in "*Vu*", July 10th, 1935, p. 935.

Pierre Cot concludes from the high technical level of the Soviet Air Force that the Red Army as a whole is on a high technical level, and his argument is logical. The Soviet aero-industry builds the most air-worthy machines in the world, machines which can stand successfully up to the enormous wastes of the Arctic Circle. A modern bomber is a flying laboratory with innumerable auxiliary technical aids. It has apparatus for blind flying, for communicating with the earth, for bombing, and for controlling the flight in every detail. All this highly complicated equipment is manufactured from beginning to end in the Soviet Union, and its level of technical performance is not exceeded by any other country in the world. Two such experts as Pierre Cot and Henri de Kerillis, men of widely divergent political views, have both admitted that France lags far behind the Soviet Union in this respect.

The high quality of Soviet war production is no more miraculous than its huge volume. For almost a decade now the Soviet Union has purchased the best models and the best types from all the highly-developed industrial countries of the world, and introduced them into her own war industries. The highest achievements of international military technique meet in the technical equipment of the Red Army: the famous American Christie tank, the British tanks Vickers and Carden-Lloyd and the French tank Renault. Soviet aeroplanes are equipped with the world's finest engines: the French Hispano-Suiza (which is itself the product of international technical co-operation) and the French Gnôme et Rhône, the British Bristol-Jupiter, and the American Wright-Cyclone. Soviet aeroplanes are now also equipped with the French automatic cannon, etc. It must be borne in mind that these motors, etc., are not imported, but manufactured throughout in the Soviet Union on licence and in great quantities. Thus, whilst the U.S.A. and Great Britain have each no more than a few hundred of their best tanks, the Red Army has many thousands of the same models. Naturally, the war industries of the Soviet Union are not content merely to take over these foreign models and copy them pedantically; on the contrary, the native military technique of the

Soviet Union is also highly developed, often along lines which are unknown in other countries, for instance, super-heavy bombers, super-heavy aero-engines and certain types of light tanks.

Practical experience has demonstrated that Soviet war material is durable and of high quality. The number of air accidents in the Soviet Union is relatively less than in Germany, Japan and France. The Red Army manœuvres, which took place near Kiev in 1935 and near Minsk in 1936, amply proved the capacity of Soviet war material to stand up to great wear and tear. Colonel Martel, a member of the British Military Mission present at the 1936 manœuvres, declared to correspondents:

> "The fact that only very few tanks were compelled to fall out on account of mechanical defects, and that there were no air accidents and no forced landings inspires us with respect for your tanks and aeroplanes." [1]

Over 1,000 tanks and over 1,000 aeroplanes were in action at these manœuvres and they were subjected to very gruelling tests. Each aeroplane was in the air for several hours during the manœuvres, and all the tanks covered long distances. In short, it is not too much to say that the war industries of the Soviet Union have successfully mastered all the processes of production known to modern technique.

Numerous competent experts have borne witness to the technical excellence of Red Army equipment.

General Loizeau, the Chief of the French Military Mission present at the Kiev manœuvres in 1935, declared:

> "The technical level of the Red Army is extraordinarily high." [2]

After witnessing the Minsk manœuvres in the following year, General Luza, the Chief of the Czech Military Mission, declared:

> "The Red Army is liberally equipped with modern technical resources. In my opinion it leads the world in this respect. There is not another army anywhere which can compare with the Red Army in the matter of technical equipment." [3]

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[1] As reported in the "*Pravda*" of September 14th, 1936.

[2] As reported in the "*Temps*" of September 19th, 1935.

[3] As reported in the "*Pravda*" of September 14th, 1936.

In 1934 a White-Russian emigrant, Colonel Saitzev, published a book in Germany enumerating the alleged deficiencies of the Red Army, but he was hauled over the coals very thoroughly by the German "*Militär-Wochenblatt*" [1], which told him bluntly that he had underestimated the effectives of the Red Army, that the shortage of machine-guns and artillery and the insufficient fire-power of the cavalry arm had already been remedied under the determined leadership of Voroshilov, and remedied in a thoroughly efficient and modern fashion, that the author had also drawn dangerously erroneous conclusions from alleged tank defects, and that the Soviet air arm was twice as strong as he assumed. The incident is typical of the great respect which German military circles had for the Red Army even in 1934.

The military technique of the Red Army is highly developed in all spheres: fortifications, war chemistry, mountaineering, engineering, the intelligence service, the signalling corps, camouflage—in all these respects the Red Army is equipped with the very latest technical resources. In fortification and military engineering the Red Army takes second place only to the French Army, and according to Voroshilov Soviet technique in this respect has been based on that of France. The powerful lines of fortifications which have been erected in the Far East and on the Western frontiers are equipped with the two highest achievements of French military technique: the movable armoured turrets and the subterranean chambers made gas-proof by air pressure. Writing in the "*Petit Journal*" in May 1935 a high French officer, who was obviously in posession of the latest information about the armaments of the Red Army at the time, declared that the Soviet fortification system on the Western frontiers was equal to the Maginot Line.

4. ORGANISATIONAL STRUCTURE AND RESERVES

The Soviet Press publishes no information concerning the organisational structure of the Red Army. According to information which has appeared in the Press of other countries it would appear that the Red Army is composed approximately as follows: 100 Infantry Divisions, 34 Cavalry Divisions, 20 to 25 Tank Brigades (not including the tank units attached to infantry formations), about 100 regiments[1] of light artillery and between 60 and 80 regiments of heavy artillery. Probably about one-third of the Infantry Divisions are fully motorised.

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[1] "*Militär-Wochenblatt*", October 18th, 1934.

This peace-time army has enormous reserves. The numerical factor is a decisive one where the Red Army is concerned, but this factor now operates in alliance with powerful war industries, and its strength is increased by the latest technical developments.

The Red Army has never fully utilised its enormous reserves. The average strength of a class liable for military service is 1·5 millions, but up to 1934 only about 800,000 men were actually called to the colours, and of these only 260,000 joined the standing army whilst the others served in territorial militia-like units. This made it possible for the Soviet military authorities to choose their human material very carefully physically, socially and culturally, and in this way the standing army gradually developed into an élite trained to the highest pitch of military efficiency in a two-year service term. This army was supplemented by territorial formations, and by second-line reserve formations trained outside the regular army. In addition there was a great mass of volunteers organised by the "*Ossoaviachim*" and trained outside and apart from the army. The reserves of the Red Army thus consisted of men with varying degrees of training from raw material to highly-trained specialists. Since 1934 the proportions have been changed, and the standing army is now greater than before and therefore the number of highly-trained reserves also. Those reserves who served their terms after 1932, that is to say after the modernisation of the army and the wide-scale introduction of modern weapons of offence, are of special importance. In 1938 the Red Army had the following reserves (calculated according to their degree of training):

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[1] The "Artillery Regiment" of Continental armies consists of about 40 guns. Tr.

1. First-line reserves, i.e., those trained in the standing army in the years 1932–36 after the army modernisation—about 2·3 million men. Added to this category are the technically trained reserves: airmen, motor-drivers and military technicians, whose numbers are quite considerable. The practice in the Soviet Union is to train five fully-qualified airmen and hold them in reserve for every airman in active service.[1] "Air-mindedness" in the Soviet Union means something rather different from the idea prevalent in other countries. It means not merely the organisation of the whole population in readiness for possible air attack, but also the training of masses for active service with the air force.

> "Air-mindedness is most highly developed in the Soviet Union, where there is a widespread organisation to get the masses of the people actively interested in air sport. From their earliest years citizens of the Soviet Union are made familiar with aero-technique by the construction of models, by gliding and motor flying, by parachute descents and in all manner of aero-clubs, and in this way they develop into active creators of air power in the Soviet Union." [2]

There is no doubt that the Red Air Force has a bigger personnel than any other air force in Europe. In the second half of 1936 it was announced that 150,000 war pilots were to be trained. During the same period the *Ossoaviachim* trained 900,000 drivers to meet the demands of a highly motorised army, and as a further reserve there was the technical personnel of mechanised agriculture, in particular the tractor drivers, amounting to several million men.

2. The following groups may be described as second-line reserves: those men who were trained in the territorial formations during the years 1932–36—about 1·5 million men; and

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[1] See the report of Henri Andraud, former Vice-President of the Air Commission of the French Chamber of Deputies, and Under-Secretary of State in the French Air Ministry, who was a member of the French Air Mission which visited the Soviet Union in 1936, published in "*Marianne*", September 16th, 1936.

[2] Brigade Commander Tartartchenko in "*Voina i Revolutsia*", July–August 1935, pp. 10–11.

the men who were trained in the standing army in the years 1924–31—about 2·1 million men, making together 3·6 million men.

3. The third-line reserves are composed of men who were trained in the territorial formations in the years 1924–31—2·4 million men; and the men trained outside the army, whose minimum number for the years 1924–35 must be placed at about 4 millions, making a total of 6·4 million men.

The Red Army can therefore call on about 12·3 million trained reserves, not including technically-trained reserves. In addition there are the voluntarily trained reserves who for this or that reason were not included in the military quotas and who have been trained for military service through sport organisations.

There is no doubt that the first-line reserves are amongst the best trained men in Europe. With these men the peace-time standing army and its first-line technical reserves will total over 5 million men and represent the actual spear-head army of the coming war. With every succeeding year the number of fully trained reserves thoroughly acquainted with modern military technique will be augmented by 650,000. General Baratier [1] declares that the supplementary training of reservists in the Soviet Union is carried out in a much more thorough fashion than in France. The fighting qualities of the territorial troops must also not be underestimated. Referring to the former system of detailment in the Red Army, with its territorial formations on a militia-like basis and with the training of a section of the annual recruit contingent outside the army, the German General von Kochenhausen, President of the Academy of Military Science, writes:

> "One thing can undoubtedly be booked as a powerful positive factor in Russia's military system, namely the energy and determination with which from the very beginning the Russians have carried out their aim of creating a powerful military machine after the terrible collapse they suffered, after civil war and terrible economic difficulties. Although the means they have used may occasionally seem to us to be revolutionary in their rapidity, it is

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[1] Writing in the "*Temps*", November 29th, 1934.

generally speaking impossible to deny that they usually show practical common sense and considerable inventiveness. On the whole they will result in progress."[1]

This favourable judgement refers to a system which has already been abandoned in the Soviet Union in favour of one which gives the army a still more efficient structure.

In the coming years therefore the Soviet Union will be able to consolidate her advantage in the matter of man-power reserves by providing them with a thorough training in the use of modern military technique. The following table shows us the man-power resources of the three big continental powers, the Soviet Union, Germany and France, in the classes due for service in 1935–40.

Year.	Soviet Union.	Germany.	France.
1935	1,850,000	602,000	323,000
1936	2,170,000	464,100	205,000
1937	1,340,000	345,000	165,000
1938	1,460,000	310,000	171,000
1939	1,160,000	321,000	197,000
1940	1,670,000	473,800	217,000[2]

These figures clearly show the effect of the decline in the birth-rate during the war years. The numerical strength of Germany's classes drops steadily from 1935 to 1938, and despite the introduction of the two-year period of service the peace-time effectives of the French Army will be very low owing to the decline in the numbers of recruits. The classes of these years must be drained to the utmost, and even then the armies will be considerably under normal strength. During the next few years population factors will set numerical limits to all the armies of Europe except the Red Army. In the above period the average recruit contingent in the Soviet Union numbers 1,600,000 as against 420,000 in Germany and only 217,000 in France. Thus the Soviet Union of to-day has a much greater numerical advantage over the rest of Europe than Tsarist Russia had in 1914. These facts give some idea of the enormous numerical importance of the Soviet Union in the anti-German coalition, and how greatly superior in numbers she makes this coalition to Germany.

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[1] General von Kochenhausen, "*Das russische Wehrsystem*", published in the collective work "*Wehrgedanken*", Hamburg 1933, Part III, p. 72.

[2] The figures for Germany and France are taken from Oertzen's "*Grundzüge der Wehrpolitik*", Berlin 1933. Those for the Soviet Union are according to the Soviet Census of 1926, quoted in the "*Kraznaya Svesda*", September 4th, 1936.

In these years of war danger it is interesting to note the man-power resources of the Red Army: its annual recruit contingent consists of 650,000 men for the standing army and a further 250,000 for the territorial formations, but even then the potential contingent is only half used and the other half remains in reserve. Since 1936 the calling-up age has gradually been reduced from 21 to 19, so that every autumn from 1936 to 1940 a class and a half are being called to the colours. For instance, in 1936 the whole 1914 class was called up together with half the 1915 class, in 1937 the other half of the 1915 class and the whole of the 1916 class, etc. In these years therefore the annual man-power resources of the Red Army will be in the neighbourhood of 2,400,000 men, so that in a state of emergency the total available man-power reserves will be practically inexhaustible.

5. MILITARY TRAINING

The value of an army is determined by the value of its cadres, by its man-power, i.e., in the army of to-day by the degree to which this man-power is trained in the use of up-to-date weapons and in the waging of modern warfare. Is the training of the Red Army on the same high level as its war technique?

Modern armies could be divided theoretically into the "old" arms and the "new". The "old" arms are, of course, infantry and cavalry, and the "new" the tanks and the air force, whilst the artillery occupies a place between the two. This division however could only be very conditional. In the most up-to-date armies the "old" arms have already been very much modernised. Let us consider Soviet infantry: it is strongly supported by mechanised weapons of all kinds. One-third of the infantry is already fully motorised and organically part of army mechanisation, and in addition it is trained to work in closest co-operation with the tank arm. The remaining two-thirds have their own tank units. In fact Soviet infantry has reached the highest known level of tank saturation, and close co-operation with all mechanised arms is part and parcel of the military training of all infantry units. In addition the infantry is liberally supplied with specialised units of all kinds, including chemical troops, engineers and signallers. What is their capacity, however, regarded purely as infantrymen? The following is a German view:

> "The latest training manuals make it quite certain that in one year of training the men will be able to carry out systematically any battle operations which can devolve on the infantry in time of war. The training tests and preparatory tasks have been drawn up with the greatest care and the closest attention to detail, and they offer an excellent guide to every trained man. In this way a highly efficient level of training can be obtained." [1]

German military experts make no attempt to conceal their astonishment at the precision which marks Soviet military training, a precision which is maintained by the strictest methods of control. Two spheres in which Soviet infantry distinguishes itself are worth mentioning: first of all marksmanship. The art of sniping has been brought to a high degree of efficiency and there are special detachments of expert marksmen who are also expert in camouflage, etc. Their special task is to reduce dangerous enemy points by picking off the men manning them, and they must be able to shoot with a high degree of accuracy under all circumstances and in all conditions. The aim is to train 60 snipers per battalion, and in addition at least 50% of the officers and non-commissioned officers should be snipers. At the International Small-Calibre Shooting Competition in London in August 1937 in which 212 teams from 28 countries took part, the Soviet team took first place, and in the summer of 1938 at the same competition it even won all the first six places. The second sphere in which the Soviet infantry excels is the route march: up to 60 kilometres [2] a day is not

[1] *Militär-Wochenblatt*", January 11th, 1936.

[2] A kilometre is approximately ⅝ of a mile. Tr.

an unusual performance. Referring to the marching capacity of Soviet infantry, General Loizeau writes:

> "There is no doubt that in the next war the Red soldiers will be amongst the best. They are certainly better prepared to stand the trials of the coming war than others, and endurance will undoubtedly be one of the most important factors of victory in it." [1]

Another foreign observer who has expressed his opinion concerning the capacity of the Soviet infantry is the Chief of the French General Staff, General Schweissguth:

> "We saw daring and mobile infantry capable of carrying out long and rapid marches, of attacking over the most difficult country at the double, and digging trenches in the shortest possible space of time." [2]

And the Chief of the Czech Military Mission which was present at the autumn manœuvres in 1936, General Luza, declared:

> "We observed the infantry in action, and saw that they manœuvred with great ability and showed excellent control of all weapons." [3]

It is of primary importance to discover how the Red Army is able to operate with new types of weapons demanding a high degree of technical skill. Very favourable results were obtained with the introduction of modern weapons on a mass scale comparatively early, several years before the Western powers. There are airmen in the Red Army who have flown over 600,000 miles in over 7,000 flights. There are tank drivers who have been 2,500 hours at the controls. There are tanks which have travelled almost 4,000 miles, tanks which have travelled over 600 miles at a time without any mechanical defects, tanks which have travelled 300 miles through water. The highest degree of performance is demanded from both men and machines. The training of this arm is particularly important because it leads to the adaptation of modern motorisation to the difficulties and peculiarities of the plains of Eastern Europe which are very poor in roads and ways, and Voroshilov declared in a speech:

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[1] In the "*Temps*", September 20th, 1935.

[2] In the "*Pravda*", September 14th, 1936.

[3] Ibid.

"Thanks to the simplest contrivances, but thanks above all to the experience of their technicians and commanders, our tank drivers have succeeded in taking their machines through swamps without much difficulty although they were never made for that. They have crossed rivers, lakes and even bays. We have many capable tank drivers who control their enormous machines like virtuoso."

The tank drivers of the Red Army are particularly experienced in driving through forests, and through all sorts of difficult and swampy country. The performances of the Soviet amphibian tank are extraordinary. These tanks have been known to drive through tidal sea for 7 hours at a time. The technical training of the tank crews is excellent, and the commanders of even the smallest units are all trained in wireless communication. The battle training of the tank crews is equally good. The principle of sniping has been introduced into the tank corps. Let us hear the opinions of foreign military experts who saw Soviet tanks in action under war conditions at the 1936 manœuvres. General Luza declared:

"Your tank crews have completely mastered the technique of their machines. They displayed the highest possible level of technical performance under all the conditions of modern battle."[1]

General Schweissguth declared:

"We saw your tanks taking hindrances in a fashion that demonstrated the quality of their material construction and the ease with which they were operated."[2]

And Colonel Martell of the British Army declared:

"The tank leadership I saw at the manœuvres can only be described as brilliant."[3]

The training of airmen and air troops occupies a special place in the general training of the Red Army, and these men are distinguished by great daring, endurance, technical ability and fighting skill. There is no doubt that the airmen represent the élite of the Red Army. Praise from the enemy is the best form of recognition, and the German A. Just writes:

[1] In the "*Pravda*", September 14th, 1936. [2] Ibid. [3] Ibid.

> "The rescue by Soviet airmen of 110 members of the Tchelius-kin expedition from certain death in March and April 1934 showed the world what measure of self-sacrifice and real heroism the Russian is capable of." [1]

The courage of the Soviet airman cannot be separated from his endurance and technical skill. Soviet airmen hold a number of world records in altitude and long-distance flights, and particularly in altitude flights with heavy loads. Kokkinaki, Molokov, Gromov, Tchkalov and Liapidevski are amongst the finest airmen in the world. The icy wastes of the Arctic Circle have become a training school for Soviet airmen. For men who have flown tens of thousands of miles over the plains of Siberia and through the storms of the Arctic Ocean, any flight under ordinary European conditions is a pleasure hop. And that is what the organ of the People's Commissariat for Defence means when it talks of the military importance of Soviet air activity in the Arctic:

> "By conquering the Arctic we are at the same time consolidating the defence of our Fatherland."

In 1935 Soviet aeroplanes flew about 600,000 miles in the Far North, and in 1936 the length of the regularly flown air lines in the Arctic exceeded 6,000 miles. In July–September 1936 the flights carried out by Tchkalov, Levanevski and Molokov touched the topmost pinnacle of modern air achievement: a non-stop flight from Moscow to Nikolaievsk on the Amur, almost 6,000 miles, the greater part of the flight in mist over the Arctic Ocean; from Los Angeles to Moscow over three continents, a flight of 11,800 miles; and a flight round Northern Siberia of over 16,000 miles. In 1937 these flights were followed by the great Transatlantic flight of Farig, 15,000 miles in 145 flying hours; the conquest of the North Pole; and the two great non-stop flights of Tchkalov and Gromov from Moscow to the U.S.A. over the Arctic Circle which won the world record for long-distance flying. The great Transatlantic flights of U.S. and other airmen, and the long-distance flights from Great Britain to Australia, etc., cannot be compared with these Arctic flights of Soviet airmen, which were carried out over exceptionally difficult routes and under the worst possible weather conditions. French experts, including both Pierre Cot and Henri de Kerillis, are convinced that the Red Air Force has the best technical equipment and the most accurate instruments for aerial navigation. It is very probable that not another machine in the world has such marvellous aerial navigation apparatus as the "ANT 25" with which Tchkalov and Gromov broke the world long-distance record. Technical ability comes from technical training, and Soviet airmen are supreme in altitude flights, a branch of aeronautics which presupposes great technical ability. Many of them are accustomed to flying at altitudes of 26,000 to 29,000 feet.[1] The high level of preliminary training in the Soviet Union is vouched for by the fact that almost all world gliding records are held by Soviet pilots and not by Germans as was at first thought.

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[1] A. Just, "*Militärmacht Sowjet-Union*", Breslau 1935, p. 36.

Daring, endurance and technical skill are the preliminary conditions for air achievement. It is not difficult to imagine where they develop into military factors. It is easy to understand what it means for the development of military air technique when the Red Air Force establishes the highest air-field in the world in the Pamirs of Central Asia, an air-field more than 13,000 feet above sea-level. Or when it continually breaks its own world records for altitude flights with heavy loads; in other words the roof of the world for heavy bombers is being steadily raised. The Soviet Union has almost a monopoly in super-heavy bombers, and the efficiency and capacity of these tremendous engines of destruction are being steadily increased. Like the Soviet infantry and the Soviet tank arm, the Soviet air arm has also adopted the system of sniping. The bombing technique of the modern air arm has developed to such an extent that it is already approaching artillery level in precision. The "*Kraznaya Svesda*" writes that the Soviet Air Force has completely mastered the technique of modern flying and the technique of sniping, and that it aims at combining daring and swift manœuvres with the greatest possible bombing accuracy. The former Commander-in-Chief of the Red Air Force demanded absolute bombing accuracy from his men, pointing out that modern technique had already made such accuracy possible. One important feature is common to the training of all arms, namely the adaptation of both technique and human material to the peculiarities of the Eastern European theatre of war. The Red Army is more than a modern army, it is one whose training and technique are admirably adapted to the territorial conditions in which it will have to operate. Soviet troops are trained to operate under all possible climatic and other conditions: in the depths of winter, in dense forest land and in marshy districts, and their technical equipment is intended for use under all these varied conditions. The majority of Soviet troops are trained to operate on skis, and the propellor sledge is an important means of Red Army transport in winter. The whole enormous apparatus of army motorisation has been created to master the territorial peculiarities of Eastern Europe. This territory has always proved an invincible obstacle for the enemy, but the Red Army is confident that the endurance and mobility of its troops and the durability of its technical equipment will master it completely.

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[1] "*Kraznaya Svesda*", September 8th, 1937.

6. THE OFFICERS' CORPS

The Red Army has a very large officers' corps. The organ of the People's Commissariat for Defence speaks of hundreds of thousands of reserve officers (as against between 35,000 and 40,000 in the old Tsarist Army) who would be available in the event of mobilisation. In 1935 there were 16,000 students at the military academies. This means that the Red Army is supplied annually with about 4,000 officers trained to take higher commands. The whole of the former Reichswehr had no more than this (including non-commissioned officers). In examining the quality of the officers' corps of the Red Army it must be remembered that these officers have been trained for an army with vast technical resources, and as the Red Army has a greater volume of modern military technical resources than any other army in the world, it naturally follows that its officers are more familiar with the operation of modern weapons. The ideal unity of strategic and technical experience demanded by German Army reformers has long ago been realised in the officers' corps of the Red Army. The youngest infantry subaltern is trained for close co-operation with tank and other technical units. Pierre Cot writes of the officers of the Red Army as follows:

> "They are young. They work hard. Their intellectual activity is remarkable. Everywhere throughout the Red Army we found laboratories, workshops and technical equipment for independent work which aroused our admiration. There is nothing similar in our officers' training schools in Paris, Lyon or Marseilles." [1]

Six months later he wrote as follows concerning the commanders of the Red Army, and in particular of the Air Force:

> "They are men who are thoroughly abreast of modern military theory and modern military technique. Their leaders are young, their critical sense is well developed, and they give one an impression of intelligence and energy. Their cultural horizon is broad, and their intellectual curiosity (the basis of all culture) and the extent of their knowledge astonished me." [2]

The Italian General Graziolli, whose political views differ widely from those of Pierre Cot, received the same impression. He declares that the officers of the Red Army are earnest men with a high sense of duty who have proved themselves to be first-class military leaders.[3] In his opinion they are as free of all doctrinaire thinking and as enterprising as the generals of Napoleon, and are probably capable of equally great performances. They have, he declares, imbued their men with a new revolutionary spirit, with progressive ideas and fighting initiative. Both Italian and French observers were particularly struck by the youth of the Red Army Commanders, and so was the British General Wavell, who was present at the autumn manœuvres of the Red Army in White-Russia in 1936.

[1] In "*L'Oeuvre*", February 19th, 1935.
[2] In "*Vu*", July 10th, 1935, p. 966.
[3] In the "*Giornale d'Italia*", October 1934.

"The higher officers are younger than in most other armies, including the British Army. That is a favourable factor. The army needs young and physically active officers." [1]

The overwhelming majority of the higher officers and members of the General Staff of the Red Army were between the ages of 25 and 40. An interesting example is that of Gailit, the former Commander of the Ural Military District, who was one of the leading athletes in the country. It is difficult to imagine a commanding general in either the French or German army as a champion skier. It is a matter of principle in the Red Army that an officer training his men must demonstrate to them what they have to do, and he may not demand anything of them he is unable to perform himself. Youth and technical experience are the two chief features of the Soviet officers' corps amongst the officers' corps of Europe.

The events of 1937–38, the brutal purge carried out amongst the topmost ranks of the officers' corps, the executions, arrests and degradations, the dismissals and reorganisation—all carried out for political and not military reasons—have seriously damaged the officers' corps of the Red Army. It is noteworthy that in dictatorship and semi-dictatorship countries like the Soviet Union, Germany, and Poland, where the officers' corps enjoys the special favour and protection of the State, its members at the same time enjoy less security than in the democratic countries. The events referred to have certainly not completely disabled the Red Army or destroyed its value as an ally, as has often been said in Western Europe. The purges which have taken place in the German and Polish Armies have also not rendered them *hors de combat.* A modern army is a tremendous and impersonal piece of mechanism, and no matter how heavy the individual losses in its officers' corps, it still remains ready for action. Numerically, both absolutely and relatively, the losses of the officers' corps of the Red Army were not so great as those which were suffered by the Polish officers' corps after the seizure of power by Pilsudski, when 4,000 officers were dismissed for political reasons, including brilliant generals like Sikorski and Haller. The loss of valuable officers in the recent purge in the Red Army led to no change in the strategic line of the army, unlike the change which occurred in the doctrine of the German Army when the Fritsch, von Loeb, Beek group was dismissed. With their departure the Schlieffen tradition in German strategy received its death-blow. Red strategy, on the other hand, is determined by objective conditions. The wholesale purge amongst the higher command lowered the strategic quality of the Red Army by removing Tukhachevski, Egorov, Uborevitch, Yakir, Alksnis, Putna and others, and damaged it by sowing the seeds of uncertainty and mistrust in the officers' corps.

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[1] In an interview given to the "*Pravda*", September 14th, 1936.

7. WEAK POINTS IN SOVIET MILITARY STRENGTH

The military strength of the Soviet Union is, of course, not beyond criticism, and it has its weak sides. The latter are, generally speaking, more a matter of the military strength of the country in the broader sense of the term, i.e., a matter of war potential, rather than of the army itself. When examining this problem we must not accept blindfold the usual criticisms of Soviet military strength current abroad, because, generally speaking, the people making them are blinded by prejudice, and as a result they fail to keep abreast of reality and often overlook the real weaknesses.

For instance, in the spring of 1936 the "*Petit Parisien*" published a series of articles on the Red Army from its Moscow correspondent, in which "the still brittle industrial structure of Soviet Russia and the lagging rhythm of production" were counted amongst her weaknesses. There is an obvious misunderstanding here, because the structure of Soviet industry with its ultra-modern technical equipment and the biggest raw-material resources in Europe can certainly not be termed brittle. And the contention that the rhythm of Soviet production is weak is even less true. Between 1928 and 1936 the volume of Soviet industrial production increased by 480%. Since 1934 the production of pig-iron and steel has almost doubled. In 1925 French steel production was three and a half times as great as Soviet production, but in 1936 Soviet steel production was two and a half times as great as French production. This rhythm of Soviet production can hardly be termed weak, and, in fact, it represents one of the most important factors of the war potential of the Soviet Union.

The real weaknesses of the economic potential of the Soviet Union must be sought elsewhere. First of all there is the lack of proportion created by the extraordinarily rapid development of the economic system and the resultant lack of cohesion between its various sectors. At various stages of development we find, according to the given situation, that transport is backward, or heavy industry or coal, as compared with the volume of production as a whole. In addition, in the years 1936–38 the atmosphere of doubt and uncertainty created by political purges adversely affected production as a whole, and war production suffered as well. Then there is the low level of quality in certain branches of industry caused by the insufficient training and technical skill of the workers employed, and by the insufficient rationalisation of production. However, two factors must not be forgotten. First of all the war industries proper are on a very high level. They have the best equipment, and the quality of their production is high. The defects of Soviet civil aviation in the matter of technique and organisation are not shared by the Red Air Force. And further, Soviet industry as a whole (with the exception of the consumption industries) is making extraordinarily rapid technical progress and this is resulting in better quality and rationalisation. Soviet industry is not adopting European industrial technique, but the very latest methods and norms of the United States in mass production, etc. It was on this basis that the Soviet military aero-industry developed, and it has since far outdistanced its American model in quantity.

The other criticisms of Soviet war potential are embodied in the parliamentary report of Archimbaud from which we have already quoted. In this case Archimbaud himself later withdrew his criticism as unfounded. At the conclusion of his 1935 report he declares:

> "We are entitled to assume that the Red Army, whose characteristic features are numerical strength and increased war material, represents a serious defensive force, in particular at the beginning of a campaign. However, the social and professional quality of its cadres, the morale of the men and the state of transport will permit the Red Army to envisage only simple operations of a limited duration. The support that the Red Army could give us in the event of a conflict would be almost entirely limited to the air. This support could be extended to war on land only in the event of the possible opponent having a joint frontier with Soviet Russia."

One of the critical observations of Archimbaud is worthy of special attention: the reference to the unfavourable state of Soviet transport. This is the argument which is most frequently used to prove that the Red Army is not ready for war. There is no doubt that transport represents the biggest problem in the Soviet Union, but at the same time we must deal with the situation as it exists to-day, and we must see the existing difficulties in their proper proportion, because very considerable progress has been made in recent years in transport in general and railway transport in particular. In 1937 the total amount of goods transported by rail was four times as great as in 1913, and almost twice as great as in 1932, and the daily loadings of waggons have been doubled and trebled. Intense work is also being carried out to extend the road network and improve existing roads. Two strategic motor roads will be completed in 1938 connecting Moscow, the centre of the strategic reserves of the Red Army, with Kiev and Minsk respectively. The Moscow–Minsk road will be 430 miles in length, and the Moscow–Kiev road 580 miles.

It is clear that the most important military frontier districts are receiving prime consideration. Haudmann writes:

> "The building and improvement of Soviet roads, and Soviet ways and communications plans in general, are carried out primarily from the standpoint of military strategical considerations. Therefore the militarily important districts have a relatively dense

> network of good roads. . . . The Soviet Union is primarily concentrating road-building activities in such districts in order to create conditions for the use of the motorised units. This is true above all of the Western frontier districts which are the centre of Soviet strategical road planning."[1]

The problem of transport was solved for the Far Eastern Red Army by the tremendous amount of railway building which took place between 1933 and 1938. The old Trans-Siberian single-track line was doubled throughout its entire length, and in addition another 5,000 miles of line were laid down. This building work not only solved the problem of supplies for the Far Eastern Red Army but also created the transport basis for its strategic manœuvres.

Another factor plays an important role, namely the all-round motorisation of the Red Army, which presupposes the all-round motorisation of its basis of operations. Motorisation on a large scale represents a powerful supplement to the railways and a considerable relief of the pressure on them, and to a certain extent it emancipates the army from its dependence on the railways. Cross-country vehicles are not bound down to roads. Military experts reckon that the development of the air arm endangers railway communication to a depth of between 180 and 250 miles behind the front lines. Systematic attempts will be made to destroy or at least cripple railway communications in this area, and then motorised transport must take up the burden. The "*Pravda*" declares:

> "Cross-country motor transport must perform the task of supplying the army with food, war material and fuel. It must also bring up reinforcements and carry out whatever troop movements may become necessary during the course of military operations."

The transport crisis in the Soviet Union is thus being solved step by step: by progress on the railways, by the building of roads, and by all-round army motorisation. In addition, Soviet railways are very favourably situated for serving the Western frontier districts: 17 lines with a total of 29 tracks lead from the interior to the Western frontier districts. It is not only Soviet military writers, but also the military experts amongst emigrant White-Guardist Russians who stress this very important circumstance in their writings, and there is every practical reason for it because, together with the technical progress which has been achieved in recent years on the Soviet railways, it represents a very important factor indeed. Colonel Saitzev, from whose book we have already quoted, is usually prejudiced against the Red Army and seeks always to minimise its fighting powers, but referring to the transport resources at the disposal of the Red General Staff even he has to write:

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[1] Dr. Ervin Haudann, "*Das Motorisierungs Potential der Sowjet Union*", Hamburg 1937, pp. 100 and 102–3.

> "The location of the railway network makes it possible to transport troops from the main line (Leningrad–Sebastopol) to the frontiers along fourteen direct lines; or, in other words, the grouping of Soviet military strength in peace-time is carried out with a view to a rapid concentration of at least half the strength of the Red Army on the Western front in the very earliest days of the war. The existence of three closely connected lines makes it possible to concentrate the main weight of the Soviet military forces at any required sectors of the Western frontier." [1]

Was there any basis at all for the criticisms made by Archimbaud, and afterwards withdrawn? The "social and professional quality" of the Red Army is hardly one of its weak points. The "social" quality of the troops apparently refers to their democratic origin, but this is a source of strength and not of weakness. It was the source of victory in the civil war, and to-day it gives the Red Army a unique possibility of utilising talent to the full, as well as youth and élan. The fact that the officers' corps of the Red Army is chiefly recruited from the ranks of the people does not, despite certain defects in general preliminary education, mean a low cultural level, because the whole country is experiencing a period of rapid cultural progress. And as far as their professional quality, i.e., their technical training for war, is concerned, we have the evidence of the leading military authorities in Europe that it is not lower than the level of other armies, and that, in fact, it is in many respects superior. Small wonder therefore that it did not take Archimbaud very long to discover his error.

[1] Colonel Saitzev, "The Red Army" (Russian), Berlin 1934, p. 42.

8. A POLITICAL ARMY

The Red Army is something more than a mere military instrument. It is at the same time a school and a political organisation. There is no other army in the world which pays greater attention to the question of education. The Red Army is an educational institution which seeks to raise the general educational level of its men. It has innumerable schools and over 2,000 libraries, and every soldier has to have some general knowledge of both modern and classical literature. The French military expert, Henri Bidou, declares that the general education and training of the ordinary Red soldier are as high as those of a German non-commissioned officer, and Bidou has had the opportunity of studying both systems at close hand. Referring to the Red Army, he writes:

> "The ordinary soldier in the Red Army has a level of education, discipline and professional earnestness unrivalled in any other army." [1]

Education is closely connected with politics. The Red Army is a political army; it gives the soldier a political education and moulds his general social outlook. The relation of Party and Army in the Soviet Union is very different from that which prevails under a fascist dictatorship. In the totalitarian States the army is to a certain extent an institution apart which cannot be assimilated by the ruling party despite all its attempts at universal incorporation. In the fascist States the old army was taken over, it was not created by Fascism. The Army is declared to be above politics and there are no party-political organisations within it. The officers' caste remains isolated and secluded, and maintains its own traditions. In the fascist State there is an unavoidable dualism between the Party and the Army, and in critical situations this cleft can threaten the very existence of the dictatorship. Under such circumstances conflicts break out very easily between Party and Army: e.g., Fascism versus the older Reaction and perhaps the

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[1] Henri Bidou in an article in "*Vu*", July 10th, 1935, p. 919.

Crown, or in Germany the monarchist tradition, or between fascist leadership and fascist foreign policy on the one hand and the military necessity of a suitable strategy on the other. Such conflicts are impossible in the Soviet Union. The Bolshevist Party created the Red Army, it did not take it over, and a political organisation, a military party organisation, embraces the whole army from top to bottom and gives it ideological cohesion. Naturally, the Red Army as a political army is subject to crises, for instance the crisis recently brought about by terrorist political purges amongst the higher strata of the officers' corps, whose members have in one form or the other played an active role in the factional and group struggles within the Bolshevist Party. The military damage done by these brutal purges is obvious, but they have not destroyed the stability of the army, or affected the reliability of the lower and middle strata of the officers' corps and of the rank and file, and that is the decisive factor. The military party organisation and its political education guarantee the absolute reliability of the masses in the army and give them ideological élan. It is interesting to read the verdict of enemies of the Soviet Union in this respect: White-Guardist military experts and German military men. Colonel Piatnitzki, whose writings we have already quoted, declares:

> "It is naïve to expect an explosion of general dissatisfaction from the army. The tentacles of the party have seized too cleverly and too firmly not only on the leaders of the army, but also on the masses of the army." [1]

And Colonel Saitzev declares:

> "And above all efforts are being made to identify Army and Party, and from this develop the logical and determined labours to make the army, and in particular its officers' corps, socially proletarian and politically communist. At the same time everything possible is being done to ensure that the political organisation covers the whole army from top to bottom. Thanks to these measures the Communist Party has the Red Army well in hand; in other words, the Red Army is a completely reliable instrument of the Soviet political authorities." [2]

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[1] Colonel K. Piatnitzki, "The Red Army of the U.S.S.R." (Russian), Paris 1931, p. 160.

[2] Colonel Saitzev, "The Red Army" (Russian), Berlin 1934, p. 116.

This fact is still more strongly underlined by the "*Deutsche Wehr*", a German military publication which always pays particular attention to political problems as they affect military matters:

> "Since the existence of the Red Army there has been no single case of mutiny either at the front or behind the lines. The question as to the reliability of the Red soldier in the event of war must be answered in the affirmative." [1]

And in March 1937 the British Conservative "Round Table" declared in an article on the defensive strength of the Soviet Union that in the matter of morale there was hardly another army in the world which could compare with the Red Army.

Complete political reliability and high morale together with powerful economic backing and modern war technique are the main factors of Red Army strength.

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[1] "*Deutsche Wehr*", December 12th, 1935, p 802.

CHAPTER III

THE OFFENSIVE STRENGTH OF THE RED ARMY

I. THE RED AIR FORCE

MODERN WEAPONS ARE all weapons of offence, and they form the technical basis for a new strategy. The modern technical equipment of the Red Army means that its strength lies primarily in weapons of offence, and a closer examination of the armament at its disposal (air force, tank corps, cavalry, chemical weapons, artillery, etc.) disposes once and for all of the suggestion that the Red Army is powerful only as a defensive factor. However, the question as to whether the Red Army could conduct a successful offensive, and to what extent it could do so, is one of paramount importance for the relation of military forces in Europe. The offensive strength of the Red Army determines in the last resort the value of the Soviet Union as an ally and her value as a counter-blast to National Socialist Germany. The whole of Europe is vitally interested in knowing whether National Socialist Germany will have a monopoly in the mass use of modern weapons of offence, or whether the Soviet Union will break this monopoly.

The air force is the arm of the Red Army which is best known abroad. This young weapon of the Soviet Union has won itself international renown, and its magnificent performances have won recognition all over the world. Even the sceptics, even the enemies of the Soviet Union in fascist countries, and even the opponents of the Franco-Soviet Pact in France, are compelled to recognise the unique character and military importance of the Soviet Air Force. The air arm possesses twofold importance: it is specifically a weapon of offence and gives a modern army undreamt-of technical and strategical possibilities, and secondly, it is specifically the weapon for a policy of military alliance. It is the weapon which can be used first and quickest against the enemy, and it is the weapon which can first come to the assistance of a hard-pressed ally. No competent person seriously questions the fact that the Red Air Force is the strongest in the world. Even when the French deputy Archimbaud expressed doubts about the staying-power and offensive strength of the Red Army in general in his reports to the Chamber in 1935 he described the Red Air Force as the strongest in Europe. In a speech delivered to the Chamber on February 28th, 1936, Pierre Cot quoted from a report of the French Ministry of War:

> "The air force of the Soviet Union is already the strongest in the world, and it is rapidly being strengthened still further."

And Colonel von Bülow wrote in the organ of the German War Ministry:

> "In recent years the air force of Soviet Russia has been strengthened to such an extent that it is now the strongest in the world. It forms the core of the whole military strength of Soviet Russia." [1]

And General Groves, who is by no means a friend of the Soviet Union, but who is one of the foremost British authorities on air warfare, also described the Red Air Force in 1935 as the strongest in the world,[2] and Captain Liddell Hart, one of the foremost military experts in Great Britain, agrees with him:

> "The Soviet-Russian Air Force is the strongest in Europe at the moment." [3]

And finally let us hear the Commander-in-Chief of the Czech Air Force, General Faifr:

> "It has already been proved that the Soviet Union has not only capable and splendidly-trained airmen, but that Soviet aviation is ahead of all others in the world in respect of its material." [4]

[1] Colonel von Bulow, "*Grundlagen der neuzeitlichen Luftstreitkrafte*", in the "*Militarwissenschaftliche Rundschau*", December 1935.

[2] General Groves, "Our Future in the Air", Harrap, London 1935, p. 50.

[3] Captain Liddell Hart, "Europe in Arms", Faber & Faber, London 1937, p. 16.

[4] As reported in the "*Kraznaya Svesda*", June 30th, 1937.

Thus leading authorities throughout the world confirm the observations of the Second-in-Command of the Red Air Force, Chripin, at the Soviet Congress in December 1936:

> "Our air force is a powerful weapon which can stand comparison with the air forces of all other countries in numerical strength, in the quality of its equipment, in the training of its personnel, in the cohesion of its cadres, and in the readiness of its members to make the utmost sacrifice in the event of war." [1]

Formerly it was difficult to obtain reliable figures concerning the strength of the Red Air Force, but to-day its strength can be determined more or less accurately, and the reports of the members of the French Air Mission which visited the Soviet Union in the late summer of 1936, the recent thorough examination published by Colonel von Bülow in the organ of the German War Ministry, and information which has appeared recently in the French and Swedish Press, offer a fair basis for an objective judgement. The reports of the members of the French Air Mission are particularly valuable, because amongst its members were men whose names are world-famous in the aeronautical world, for instance the aeroplane constructors Bréguet and Potez (the latter is the constructor of the famous French military plane which bears his name), the famous war ace Bossoutrot, who is now chairman of the Air Commission of the Chamber of Deputies, and Andraud, who is Under-Secretary of State in the French Air Ministry.

According to these sources there are between 200,000 and 250,000 workers employed in the Soviet aero-industry, many of them employed in factories working three shifts a day. The results of Soviet rationalisation and mass production are almost incredible, Bréguet tells us. Soviet aeroplane factories turn out machines on moving bands like France turns out motor-cars. According to the French Air Commission reports, confirmed from other sources, 5 big Soviet aeroplane factories turned out between 4,000 and 5,000 machines in 1936. According to French calculations there are about a dozen big aeroplane factories in the Soviet Union, and

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[1] "*Kraznaya Svesda*", December 2nd, 1936.

Colonel von Bülow[1] even puts the number as high as 28, and calculates the number of machines produced in the Soviet Union in 1936 to have been about 8,000. Chripin confirmed the enormous increase in production in 1936, when he pointed out that it was almost twice as great in the first 10 months of 1936 as in the corresponding period of 1935 (an increase of 94%). In the meantime the productive capacity of the Soviet aero-industry has increased still further. Colonel von Bülow calculates that the Soviet Union is now in a position to produce between three and four times as many machines as in 1936, i.e., about 20,000 annually, and Bréguet is of the same opinion. This is also confirmed by the production of aero-engines, which is far greater than the production of aeroplanes both absolutely and relatively. Four chief types of aero-engines are produced in the Soviet Union: the foreign motors Hispano-Suiza, Gnôme et Rhône, the Wright-Cyclone and the Soviet motor AM34. The last-named is the most powerful engine in Europe at the moment and it develops 1,250 H.P. According to Chripin the production of aero-engines increased by 146% in 1936 as compared with 1935. The factory producing the Soviet AM34 motor turned out no less than 20,000 in 1936, according to the report of Andraud, vice-chairman of the Air Commission of the French Chamber, who was a member of the French Air Mission to the Soviet Union.

What was the probable strength of the Red Air Force in 1938? Colonel von Bülow reckons that in 1937 it had between 8,000 and 10,000 first-line planes, whilst an American expert put that number as probable a year earlier. The productive capacity of the Soviet aero-industry is undoubtedly sufficient to permit such and even considerably higher levels. The actual strength of the Red Air Force is determined by the production programme of the aero-industry, by Soviet war plans, and by the technical and strategical performance the military leaders of the Soviet

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[1] Colonel von Bulow, "*Die Luftwaffe Sowjet-Russlands*", in the "*Militärwissenschaftliche Rundschau*," December 1936, p. 803.

Union will demand of it. It is hardly possible to put any limits to the maximum productive possibilities of the Soviet aero-industry. It is undoubtedly capable of reaching the highest possible levels of our day both with regard to quality and quantity.

Colonel von Bülow writes:

> "The necessary basis for war production in the aero-industry must be laid in time of peace by a planned economy of positively prophetic foresight. In this connection those countries which are economically dependent on foreign sources either in the matter of productive preparedness or of raw material supplies, are at a disadvantage as compared with those countries which are economically self-sufficient. To-day there are only two countries in the world which are completely economically independent and in a position to produce aeroplanes and aero-engines on a mass scale indefinitely, namely Russia and America." [1]

We may assume that in the event of war, let us say in 1939, the Soviet Union would have an air force of the maximum strength considered possible by international military experts, namely between 10,000 and 12,000 machines. This contention receives support not only from the known productive capacity of the Soviet aero-industry (aeroplanes and aero-engines), and the strength of the Red Air Force in the first half of 1938, but also from the number of air reserves available in the Soviet Union. In December 1936 the Soviet Union decided to train 150,000 war pilots, and since then this aim has been pursued with great vigour and determination, and the training organisation has been greatly extended. The first contingents of this new vast air army are reported to have passed out with their training complete at the end of 1937 and the beginning of 1938, and strengthened the trained air reserves at the disposal of the Red Army. From this aim it may be concluded that the leaders of the Red Army reckon to wage air warfare with between 12,000 and 15,000 machines, and that for every active pilot, etc., there would be 5 trained reserves. Two competent authorities go beyond this estimate. The "*Wehrmacht*", a German military organ, put the strength of the Red Air Force at between 15,000 and 17,000 machines for 1937, and the Prague organ of the Czech Agrarian Party, "*Venkov*", estimated on the basis of former strength and the latest increase in the production of the Soviet aero-industry that the strength of the Red Air Force would be about 16,000 machines in the middle of 1938.

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[1] Colonel von Bülow in the "*Militärwissenschaftliche Rundschau*", December 1925, p. 78.

European military experts are of the opinion that the Red Air Force is by far the strongest in the world not only numerically but also in the matter of quality. Numbers and first-class technique complement each other in the Red Air Force, and the Soviet aero-industry is served by absolutely modern and progressive scientific laboratory work.

Colonel von Bülow writes:

> "There is probably no other country in the world which has such a network of experimental stations, laboratories and training centres, and all their efforts are exclusively directed to developing the Soviet air arm to the highest possible level of technical perfection." [1]

He then gives a long list of the technical and scientific institutions whose work forms the basis for Soviet aero-production. Referring to one of these institutions the "*Temps*", which is by no means pro-Soviet, writes:

> "Thanks to the assembly under one roof of numerous excellently equipped laboratories and many constructional workshops with the latest technical equipment, the ZAGI (Central Aero-Dynamic State Institute) is undoubtedly a unique institution. We can only hope that the creation of a future scientific centre for the French air industry will take the ZAGI as a model." [2]

The Red Air Force has the advantage of a good start in the matter of quality also. At the Moscow May-Day parade in 1935 200 fighter planes capable of a speed of 250 miles an hour took the air.[3] A few days later when Laval visited Moscow he was shown aeroplanes in flight at a speed of over 260 miles an hour. Both these types of plane represented record performances at the time. In the first half of

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[1] Colonel von Bulow in the "*Militarwissenschaftliche Rundschau*", December 1936, p. 806.

[2] "*Temps*", July 13th, 1936.

[3] Ibid., May 2nd, 1935.

1935 no power in the world had hundreds of machines capable of such speeds. And in 1932 only the Red Air Force had heavy bombers in masses. In the years 1935–37 the Red Air Force was re-equipped. In 1935 it was provided with great numbers of fighter planes capable of a speed of 260 miles an hour (J15 and J16 machines), medium bombers with a speed of 250 miles an hour (SB2 machines), and heavy bombers with a speed of 220 miles an hour. In the following year machines capable of still greater performances were introduced: fighter planes with a speed of over 300 miles an hour (ZKB19 machines and, since the summer of 1928, the "Hawk" type), light bombers with a speed of almost 300 miles an hour, and heavy bombers with a speed of 250 miles an hour.[1]

These were record performances, but whilst other countries were providing their air forces with the latest aeroplanes a few squadrons at a time, the Red Air Force was receiving such machines in really large numbers. The former Commander-in-Chief of the Red Air Force, Alksnis, wrote:

> "Soviet aeroplanes produced in mass production are superior in speed to the machines of the leading capitalist countries." [2]

Soviet aeroplanes have already proved their value under war conditions in the Spanish civil war, and their clear superiority over the German and Italian machines was demonstrated throughout 1936–37. The famous American war ace, Major Lord, who shot down 22 German aeroplanes during the World War, describes the qualities of the Soviet aeroplanes he saw in action in Spain as follows:

> "Their bombers are veritable flying fortresses; they are so fast and so difficult to hit that they can carry out raids without being accompanied by fighter planes to protect them. As far as the Soviet fighter planes are concerned, they are in my opinion superior to the corresponding planes sent to Spain by all other countries." [3]

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[1] How varied the Red Air Force material is can be seen from a report in the "*Kraznaya Svesda*", of October 2nd, 1938, to the effect that Major Stefanovsky had just completed the flying test of his hundredth type of plane.

[2] In the "*Kraznaya Svesda*", August 14th, 1937.

[3] In "*Le Journal*", January 18th, 1937.

This is also the opinion of all French observers in Spain, including both fighters and journalists. Two French engineers, experts on aero-construction, one of whom had served with Franco and the other with the Spanish Government, agreed (their evidence was published in the form of a memorandum in "*Paris-Midi*") that Soviet aeroplanes in Spain had proved themselves far superior to all others. This opinion is also shared by the French airman Hilaire du Berier, and by French Right-wing journalists experienced in military matters like Henri de Kerillis and Didier Poulain. The opinion of General Armengaud, probably the foremost living French authority on air warfare, is equally decided on the point:

> "Thanks to their better quality the Soviet planes compensate in some measure for the insufficient numerical strength of the Spanish Republican Air Force." [1]

The renewal of equipment in the Red Air Force is proceeding very rapidly, and Colonel von Bülow assumed that by the spring of 1937 between 50 and 75% of the Russian air arm would be provided with the very latest air material.[2] The official report presented to the French Chamber of Deputies in November 1936 on the state of air armaments in France and in other countries, even declared that the re-equipment of the Red Air Force was completed in the course of 1936. This rate of re-equipment seems almost incredible compared with the much slower rate in the other air forces of Europe. However, two circumstances favour acceleration in the Soviet Union: first of all there is the enormous productive capacity of the Soviet aero-industry, and secondly the much shorter period necessary for the introduction of new types. Major Lord, who questioned Soviet airmen in Spain on the point, tells us that whilst in France, Great Britain and the U.S.A. a new type is still in the hands of the technicians for examination followed by lengthy discussion as to whether it shall be adopted or not, similar types are already leaving the Soviet aero-factories in masses.

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[1] In the "*Revue des Deux Mondes*", August 15th, 1937.

[2] In the "*Militärwissenschaftliche Rundschau*", December 1936, p. 806.

[3] Report of the Finance Commission of the French Chamber of Deputies, "*Annexe du procès verbal de la seance du* 12. *Novembre* 1936", N. 1287.

2. A TEN-THOUSAND-TON BOMB SALVO

What is the fighting value, the striking power of the Red Air Force? There is a numerical measure of the striking power of an air arm, namely the total bomb load it can carry, the so-called bomb salvo. A French source, Pierre Naquet in the "*Paris-Midi*", puts the bomb load of the Red Air Force at 1,200 tons for the beginning of 1935, the Italian at 350 tons, and the French at 300 tons. As absolute magnitudes these figures have long ago become obsolete, but the respective proportions are still worth noting because at a time before the great technical advance of the Red Air Force they clearly indicate its air hegemony in Europe. A non-Soviet source thus places the striking power of the Red Air Force at the beginning of 1935 as compared with other big continental powers at 3·5:1 or even 4:1.

We may assume that in the event of war, say, in 1939, the Red Air Force would be able to put approximately 12,000 machines into the air. How many of these would be heavy and super-heavy bombers? According to the French air expert Bossoutrot, one Soviet factory alone, situated near Moscow, produced on an average 750 4-engined heavy bombers annually, or 2 per day. In 1937–1938 therefore this factory has turned out 1,500 heavy bombers. Even if we assume that as a result of this or that technical difficulty the average could not be fully maintained over this period, nevertheless the fact remains that heavy bombers are being produced on a mass scale in the Soviet Union in two series, 20- and 24-ton machines. And further, it may be assumed with certainty that the factory mentioned by Bossoutrot is not the only factory turning out such machines. With a total strength of 12,000 machines, and in view of the productive capacity of the factories concerned, the Red Air Force will have certainly not less than 2,000 heavy bombers. The air-war doctrine of the Red General Staff gives pride of place to the heavy and super-heavy bomber, and Soviet-military literature points out that large numbers of bombers must be produced and held ready in peace-time. We may assume, therefore, that this type of machine is receiving particular attention. German expert sources assume that the heavy Soviet bombers (Type TB3) carry a bomb load of about 3 tons. Thus the total bomb load of this type alone amounts to about 6,000 tons. The Red Air Force also has a certain number of super-heavy bombers, whose numbers and load are unknown so far. A French military expert declared in an article in the "*Petit-Journal*" in May 1935 that the Red Air Force had several squadrons of such giant bombers each with a bomb load of between 7 and 8 tons. According to definite information supplied by members of the French Air Mission, the production of Soviet aeroplane factories consists chiefly of light, heavy and medium bombers, and in an investigation of the composition of the Red Air Force a German expert comes to the same conclusion; he even assumes that two-thirds of the Red Air Force already consists of bombers, because the function of scouting machines can easily be performed by bombers and because in reality the Soviet scouting machines are light bombers.[1] We may assume therefore that at least half the Red Air Force machines can be used as bombers if need be. Upon our justifiable assumption that in the event of war the Red Air Force will put 12,000 machines into the air, including 2,000 heavy bombers, then about 4,000 of these planes must be bombers of other categories, light and medium. Such bombers can carry loads of between 0·5 and 1·5 tons, or an average of 1 ton each. Their total load of bombs can therefore be set at 4,000 tons. The total load of bombers of all categories must therefore be in the neighbourhood of 10,000 tons, and we may say that this total is rather too low than otherwise.

In reality the Red Air Force has certain reserves which could increase the weight of its bomb salvo. Bombs can be carried by machines which are not really intended as bombers, though not systematically and in large quantities, for instance by fighting and scouting machines, etc. Such machines can carry between 0·2 and 0·5 tons of bombs each. Thus 6,000 machines which are not actually bombers could nevertheless carry a supplementary load of bombs of all kinds amounting to between 1,500 and 2,000 tons. Another possibility is the carrying of bombs by the big transport aeroplanes of which the Red Air Force has made a technical and strategic speciality. It is well known that the Red Army has a powerful new weapon in its air infantry. Plans for air expeditionary forces to be set down behind the enemy lines, or perhaps far behind them in the heart of his country, are part and parcel of the measures which will be adopted by Red strategy, and the carrying out of such plans has already been carefully prepared theoretically, technically, and practically.

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[1] Lieutenant-Colonel von Harbou, "*Die Luftaufklärung*", article in the "*Militarwissenschaftliche Rundschau*", December 1936, p. 739.

It is quite certain that there are sufficient transport aeroplanes for several Air Infantry Divisions in the Red Air Force. The air transport of an Air Infantry Division with all its equipment and war material requires several hundred aeroplanes, and the Red Air Force at war strength will certainly have between 1,000 and 2,000 such machines. This reserve is no doubt composed in part of civilian machines suitable for the purpose, and of second-line bombers of a rather older type than those now in first-line use. A big military transport aeroplane is a potential bomber, and in Great Britain, for instance, such aeroplanes are constructed to serve both purposes from the beginning. If the great mass of first-line bombers and fighters at the disposal of the Red Air Force succeed in winning command of the air, then the troop-transport aeroplanes and the less-speedy bombers can easily be pressed into useful service as bombers. The total bomb salvo of the Red air fleet would thus receive an additional load of between 1,000 and 2,000 tons.

A total bomb load of 10,000 tons for the Red Air Force represents ten times as much as was calculated for it at the beginning of 1935, and twenty-five times as much as was calculated at the same time for the French and Italian Air

Forces. The striking power of such an air force is almost unimaginable, there is no basis in experience on which to judge. All previous experience leaves us in the lurch: the World War, the Italian War on Abyssinia (during the whole course of which no more than between 1,500 and 2,000 tons of bombs were dropped), and all air manœuvres to date. New technical and strategical possibilities have been opened up to such an extent that the author of the theory of integral air warfare, the Italian General Douhet, could not have imagined them a decade ago. He had to operate on the practical basis of the Italian Air Force of his day with its total bomb load of 250 tons. The powerful air force we are discussing is ready to take the air at a moment's notice. It has a carefully prepared basis of operations. Colonel von Bülow points out very correctly that it is of vital strategic importance for the Red Air Force that all the necessary preparations should have been made to maintain the required supplies of spare parts and apparatus, and in particular of fuel:

> "In order to guarantee the necessary supplies all front-line units have already been supplied in peace-time with sufficient spare parts, etc., so that in the event of war supplementary supplies from the base will not be necessary for some time. A sufficient supply of oil fuel and lubricating oil has been assured by storage in vast underground reservoirs. . . . Thanks to preparations down to the smallest details for air action, the air force will probably be in a position to send the mass of its fighting units into action immediately upon the declaration of war, or perhaps even before." [1]

3. THE STRATEGY OF AIR WARFARE

This enormous fighting force has been built up according to a very definite doctrine of air warfare, and it will be used according to the tactical theories of this doctrine. Red strategy does not share Douhet's theory that the air arm is the only decisive weapon, and that air warfare is likely to replace warfare of other kinds altogether. Red strategy aims at developing the air arm to the utmost pitch of technical

[1] Colonel von Bulow in the "*Militarwissenschaftliche Rundschau*", December 1936, pp. 821–2.

efficiency, without at the same time weakening the ordinary land forces. Red strategy is opposed to the idea that the air arm is everything, but at the same time it is determined to utilise its power to the full in integral and combined operations. There are two fundamental methods of air warfare:

(*a*) Independent air operations designed to strike at the nerve-centres of the enemy far behind his front lines; and

(*b*) Air operations in battle in combination with land forces.

This double purpose of the air arm demands that it should be in possession of masses of aeroplanes, and it extends its use both operatively and territorially.

"The question of air armies capable of waging long-distance warfare and conducting operations 700 and 1,000 miles from their bases is now on the agenda," writes the "*Kraznaya Svesda*". The weapon for the conduct of independent air operations was created earlier in the Soviet Union than in other countries. This weapon is the heavy and super-heavy bomber. Such machines can be used over a huge area, and a radius of action up to 2,000 miles is nothing extraordinary to-day. It is the task of such machines to destroy or at least cripple the industrial centres and lines of communication of the enemy, to disorganise his economic life and his transport system, to make his mobilisation impossible and to cut off connections between his hinterland and his front lines. Independent air operations are specifically offensive actions. The Second-in-Command of the Red Air Force, Chripin, writes as follows concerning this task of the air force:

> "It is impossible to wage modern warfare without conducting independent air operations. The success of all land and sea operations depends on the successful activity of the air arm. The latest phase of air technique and armament confirms this thesis, because it gives the air arm the full possibility of conducting such independent operations. The development of higher speeds puts air defence in a very difficult position, including even the fighter plane. The effective fighting altitude of the bomber will be above the range of anti-aircraft guns, and when planes are travelling between 250 and 300 miles an hour a hit will be very exceptional.

> With the rapid increase in the fighting capacity of the aeroplane its importance as a method of air defence sinks correspondingly."[1]

The conclusion to be drawn from this is clear, and the Red Air Force has drawn it: chief weight is being laid on the air arm as a weapon of offence, and particularly for operations deep in hostile territory. The weapon for such operations is the heavy and super-heavy bomber. What success has attended these efforts? In the autumn of 1934, i.e., before the Red Air Force had experienced the tremendous numerical and technical development of the subsequent years, Chripin, answering a question put by Henri de Kerillis, declared that Berlin and the industrial centres of Western Germany and also the towns of Western Japan were all well within bombing range for the Red Air Force. Since then the number of bombing aeroplanes in the Red Air Force has been trebled, their individual bomb loads doubled, and their speed and radius of action increased by at least 50%.

Apart from independent operations, the air arm is regarded in the Soviet Union as one of the normal weapons of land warfare, as a highly mobile arm to be used in combination with tanks and artillery, and to represent above all a kind of air artillery. We have already seen one example in practice of how the Soviet air arm brought the decision in battle, namely at Guadalajara. International military experts are agreed that in this battle the Republican air arm repulsed the attack of two Motorised Italian Divisions, scattered them and drove them helter-skelter without at first having the support of the Republican land forces. After this lesson the organ of the French Air Ministry wrote as follows concerning the fighting qualities of the Soviet air arm:

> "No amount of criticism can call into doubt the coolness and confidence of Soviet airmen, and the able way in which they handle their planes. The operations of the Soviet squadrons demonstrated that they can manœuvre excellently, that they have been splendidly trained for action at low altitudes, and that the squadron commanders lead them with great energy and ability."

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[1] Chripin, "The Air Force in Action", in "*Voina i Revolutsia*", January–February 1935, p. 73.

According to the tactical theories of the Red Air Force the air arm must be used on a mass scale in battle. Its tactical task in battle is to close in on the enemy from above, to establish command of the air, to attack him from the unprotected air flank and to paralyse his lines of communication. The air arm should begin the battle and take an effective part in all its phases whether defensive or offensive, and it must be used as an effective means of developing the defensive into an offensive. According to prevailing tactical ideas in the Red Army the air arm is a weapon of strategic initiative.

A well-known Soviet military writer declares:

> "Powerful forces of massed fighting planes will undoubtedly be the first operative echelon of battle." [1]

Another very important task of the air arm is to provide transport for the air infantry, whether parachutists or ordinary landing parties. In co-operation with the air arm this new air infantry arm has become a weapon of the Red Army to an extent unequalled in any other army. The Soviet Union undoubtedly has several Divisions of such trained air infantry ready in the event of war. Thanks to this new weapon with its special tactical tasks, the air arm can take the war behind the front lines of the enemy and even far into the heart of his country. According to German sources the Red Army has 70,000 trained parachutists in service, and 500,000 air-infantry reservists. The German Army has only one battalion of such men, and preparations for forming the first air-infantry regiment of parachutists were begun only in late autumn, 1938.

The Red Air Force has grown to such strength that it now represents a military factor of European importance. Two possibilities already exist:

That thanks to the strength of its air force the Red Army has already established its air hegemony in Europe; and that thanks to this flying start, the Red Air Force has already developed into an important component part of Soviet military superiority in Europe pure and simple.

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[1] G. Isserson, "The Evolution of Operative Tactics" (Russian), Moscow 1932, p. 57.

Authoritative foreign circles seriously reckon with the possibility of Soviet air hegemony in Europe. Even in 1935 Colonel von Bülow wrote:

> "In a very few years' time Russia's air fleet will probably consist of 10,000 planes, and it will then be so strong that no single air power, or even combination of air powers, can equal it." [1]

We now know that the Red Air Force reached this strength in 1937. In autumn 1934 Henri de Kerillis declared:

> "The Russian Air Force represents a very considerable factor in the West, a factor which is capable of playing a decisive role. Theoretically the importance of this role must increase with the development of air technical possibilities. . . . The day is probably not very far off when Russia will be in a position to exercise a sort of air command over the whole of Europe."

Since those words were spoke the Red Air Force has experienced a technical revolution, and has become a mass air army.

4. THE TANK CORPS

The tank arm forms the core of the offensive power of the Red Army on land, and it is supported by widespread motorisation throughout the army. The mobility of the army as a whole is thus being approximated to that of the Tank Corps. Together with motorised infantry, mechanised artillery, modern cavalry and a modern air force, the Tank Corps forms the mobile sector of the Red Army, the actual shock army. There is evidence available concerning the Soviet tank from highly-qualified foreign experts. After the Kiev manœuvres in 1935 General Loizeau, the Chief of the French Military Mission which was present, declared in an interview:

> "As far as tanks are concerned I think we shall have to put the Soviet Union in the first place. The Red Army has a whole arsenal

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[1] Colonel von Bulow in the "*Militärwissenschaftliche Rundschau*", December 1935.

> of tanks of all sizes and types, beginning with speedy little whippets and ending with veritable armoured land cruisers. That opens up wide possibilities for various operations and for the co-operation of all possible arms. Your tank park is really wonderful. Frankly, I wish we had one as good."[1]

General Guderian writes as follows in the organ of the German War Ministry:

> "The Russians have the best foreign models for ordinary commercial motors and also for tanks. They have bought Ford, Carden-Lloyd, Vickers, Renault and Christie patents and adapted them to their own purposes. They have produced their best and most modern motor vehicles in masses, they have trained their troops excellently in the use of them, and they have adapted their tactical and operative aims excellently to the performance of these troops. The Cavalry Army of Budienny of 1920 has developed into the Tank Corps of Voroshilov in 1935. . . . 10,000 tanks, 150,000 military tractors and over 100,000 military motor vehicles of various kinds put the Red Army at the head of Europe in the question of motorisation. Great Britain and France have been left far behind."[2]

A number of other German sources, including the "*Handbuch der neuzeitlichen Wehrwissenschaft*" and "*Wissen und Wehr*", put the strength of the Red Tank Corps in 1935 at 10,000. We have already pointed out that one must reckon with double this figure for 1938–39 as a result of the increase in Soviet military effectives by about one-third, of the increased saturation of the army with modern technical resources, and finally by the accelerated and powerful development of a shock army. A total of 20,000 tanks seems a tremendous figure when we remember that in the biggest battles of the World War, in the fighting near Cambrai and Amiens, the Allied Powers used only between 400 and 500 of these decisive weapons. However, the figure is not a fantastic one because even during the World War the Allied command was preparing an army of 30,000 tanks for use in the great offensive it proposed to launch in the spring of 1919. According to the leading theoretician of modern tank warfare, General Eimannsberger, a tank army concentrated for the purpose of staging a break through should consist of about 5,000 machines. As it may be assumed that the Red General Staff intends to use two such tank armies on the Western front in the event of war, one on the South-West front and the other on the West or North-West front, and as both the Soviet infantry and cavalry are liberally supplied with tanks, and as, of course, there are tanks in the reserve, the figure of 20,000 tanks for 1938–39 is not in the least exaggerated. When German military literature requires examples of the mass use of the tank it has to refer to the manœuvres of the Red Army.

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[1] In the "*Kraznaya Svesda*", September 17th, 1935.

[2] In the "*Militarwissenschaftliche Rundschau*", December 1935, p. 72.

The observations of Loizeau and Guderian concerning the composition and quality of the Red Tank Corps are in agreement. As far as quantity is concerned, the productive possibilities of the Soviet Union in this respect are practically unlimited, because it is a comparatively simple matter to switch over from the production of tractors to the production of tanks. The tank is no more than a specially constructed and armoured tractor equipped with weapons, and in 1937 the Soviet Union turned out no less than 176,000 tractors, and the big tractor works have already changed over from the ordinary wheeled tractor to the caterpillar tread variety. The reports of Army Commanders published in the Soviet military Press speak openly of the circumstances under which they use the Vickers tank and when they use the Christie tank, both of them the last word in modern armament technique. The Christie tank has a speed of 60 miles an hour on the road and a speed of between 35 and 40 miles across country. It is a magnificent example of precision and mobility, and it represents one of the standard models of the Red Army, which has several thousands of them. Above all, the Red Army is probably the only army in the world which has medium and heavy tanks in large numbers, i.e., those tanks which would be used to stage a break-through in the event of war. According to expert German evidence, at the beginning of 1936 the Red Army had 1,500 heavy tanks (models M and M2) weighing 30 and 33 tons respectively, each armed with a 76 mm. gun and several machine-guns.[1] In the opinion of Captain Perré, a French expert in tank warfare, the Red Army is the only army in the world which has introduced heavy tanks on a mass scale.[2] The Red Army has large numbers of the most powerful tank type in the world. The French Army has a similar type in service, but only in small numbers, and in the opinion of German experts ("*Deutsche Wehr*") the heavy Russian break-through tank is greatly superior to the French model. It has stronger armour and four times the speed. This Russian model (TG-5/T) weighs 100 tons, has a speed of 25 miles an hour, a crew of from 8 to 10 and is armed with a 10·5 cm. gun or a 6 inch howitzer, 2 37mm. guns, 2 heavy machine-guns and 2 twin anti-aircraft machine-guns. Thus it possesses almost the fire-power of a whole mechanised battery. The medium Soviet tanks used in the Spanish civil war signally demonstrated their great superiority in construction, armament and fire-power over both the German and Italian tanks.

Paul Reynaud writes:

> "Opinion is general that the light Italian tanks of the Fiat-Ansaldo model weighing 3 tons and having 10mm. armour plate are very considerably inferior to the Russian tanks of the T26 model weighing 9 tons and having 13mm. armour plate, and vastly inferior to the Russian tanks of the T28 model weighing 20 tons, having 20mm. armour plate and carrying 47mm. and 37mm. guns. The Germans, who also put forward one or two light-tank models, have been compelled to come to the same conclusion." [3]

Such well-known French military experts as André Pironneau and Didier Poulain have expressed similar opinions. Now it is not merely a question of saying that a heavy tank is superior to a lighter one, that is a matter of course, but of saying that the Red Army is equipped with better tanks than either the German or Italian Army, which have only very few (the Italians, in fact, hardly any) medium and heavy tanks.

[1] Information published in the "*Wehrtechnische Monatshefte*", August 1936.

[2] Captain Perré, "*Chars de Combat*", Paris 1937.

[3] Paul Reynaud, "*Le Problème militaire français*", Paris 1937, p. 79.

The Red Army is also the only army in the world which has amphibian tanks in large numbers and which uses them in regular formations. This special type of tank is of course used for carrying out special tactical tasks.

Tanks in the Red Army are used in all situations and in co-operation with all arms. They carry out reconnoitring tasks: armoured scouts, amphibian tanks and whippets. They give weight to infantry attacks, and they are organically attached to infantry units. In this case they are under the orders of the infantry commander, and their task is to go ahead and destroy enemy strong points and machine-gun nests and attack his artillery, as well as break down wire or any other hindrance to the infantry advance. Normally 10 infantry tanks per kilometre are reckoned, so that on the West front the Soviet Union must have about 6,000 such tanks at least. These are light and medium tanks. Cavalry detachments are supported by light and particularly fast tanks. The main weight of the Tank Corps, however, is concentrated in the tank units intended for long-distance operations, to turn the enemy flank and take him in the rear, or carry out a big break-through, i.e., more or less independent operations on a big scale. The Christie tanks, which are particularly mobile, are designed for such purposes, these and very heavy tanks. The former Commander of the Moto-Mechanised Units of the Red Army has described these Christie tanks as operative tanks.[1]

Tank units or, as the Russians call them, mechanised units, have developed into a specialised weapon in the Red Army, and they occupy a very important place even purely numerically. According to a German source, the "*Deutsche Wehr*", the Red Army has 25 Tank Brigades, and according to a Japanese source (a pamphlet issued by the Association of Japanese Reserve Officers) it has 15 big tank formations and 50 smaller ones. Both sources refer to the position in 1935, however. In the opinion of the Red General Staff the tank is not a weapon to be used on its own, and the British tank theory is therefore strictly rejected. In the Red Army the tank is used in co-ordination with all the technical resources of the army and in direct co-operation with other arms.

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[1] I. Chalepski, "Mechanisation and Motorisation in Modern Armies", in the "Bolshevist", July 15th, 1935

Sediakin, the former Adjutant to the Chief of the Red General Staff and now Commander of Anti-Aircraft Forces, writes:

> "The success of the British Army near Amiens was obtained by the co-ordinated efforts of infantry, artillery, tanks and cavalry. None of these arms was more prominent than the others." [1]

And in the same journal he wrote earlier:

> "Without the organised support of artillery, engineers and chemical troops, mass attacks by tanks would probably fail." [2]

In the Red Army therefore the tank is the nucleus around which new, combined troop formations have been organised. The expression "moto-mechanised unit" has developed in Soviet military literature. It means the combination of tanks, i.e., mechanised units, with motorised infantry units which follow the tanks and co-operate with them. Tank detachments are also trained to co-operate closely with cavalry. The Red Army took up the problem of training for such co-operation before any other army in Europe, and in consequence it has had much greater experience in training the formations intended for such strategical offensive tasks. Even at the beginning of 1934 Voroshilov [3] declared at the Party Congress that the Red Army had completely new types of troop units formed on the basis of intensive army motorisation and unknown in other armies. What is the peculiarity of these formations? Soviet-Russian military literature criticises the plans for motorised shock armies put forward by the British and French Army reformers Fuller and de Gaulle. It declares that such formations must be inflexible in their organisational structure, that the various arms involved are too closely dependent on each other and that therefore there is little elasticity and mobility. It indicates, too, how such defects can be avoided: by the formation of a tank reserve at the disposal of the Supreme Army Command to be sent into action where and when required; by the organisational introduction of tanks into infantry and cavalry units; and finally by creating the possibility of changing the combination of arms rapidly at need. The autumn manœuvres in White-Russia in 1936 demonstrated that the leaders of the Red Army have mastered the art of using mobile troop units supported by tanks in various combinations.

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[1] A. Sediakin, "Tanks and Anti-Tank Formations" in "*Voina i Revolutsia*", November–December 1934, p. 36.

[2] A. Sediakin, "*Voina i Revolutsia*", January–February 1933, p. 118.

[3] Reported in the "*Pravda*", February 4th, 1934.

In no other army in the world are the mechanised and motorised troops given such far-reaching and decisive tasks as in the Red Army. According to Soviet war doctrine, the decisive phase of the battle, the development and carrying out of a break-through, can be performed only by motorised units. This makes it easy to understand the strategic reasons for the wide-scale motorisation which has been introduced into the Red Army. High-speed tanks will be followed at once by motorised infantry units which will occupy enemy positions immediately and carry the fighting far into his territory until his reserves themselves have been defeated. The whole battle thus develops in one uninterrupted action.

Motorisation on a mass scale spells mastery over Eastern European territorial conditions. The strongest motorised army in the world is now concentrated in Eastern Europe, an army of great mobility, enormous fire-power and simply tremendous break-through force. The metaphor of the Russian steam-roller used in 1914 was an exaggeration then; it is so no longer. It is the plain truth, except that instead of the metaphoric steam there is now the very real internal-combustion motor to supply the driving power. With its tens of thousands of tanks and its hundreds of thousands of motor vehicles of all sorts, the Red Army could begin a great advance in the event of war.

5. RED CAVALRY

German military literature has been proclaiming the resurrection of cavalry for some time now. Leading German military experts, General Brandt, General von Kochenhausen, and General Poseck, and the "*Militär-Wochenblatt*" itself are never tired of declaring that the epoch of motorisation can and must resuscitate that honourable arm. Two conditions are put forward for the use of cavalry in modern warfare:

Cavalry must be used in great masses and not in small formations; and

Cavalry must be equipped with the latest weapons of modern warfare, and trained to co-operate in particular with tanks.

This German army thesis has been developed from the daily practice of the Red Army. What German military experts recommend in theory has been put into practice by the Red Army. In the civil war cavalry played a big role. Budienny, the Red cavalry leader during the civil war and later their Inspector-General, writes:

> "Throughout the whole civil war two characteristic tendencies were observable in the use of the cavalry arm:
>
> (1) an effort to use cavalry in masses; and
> (2) the use of strategic cavalry for decisive aims." [1]

Cavalry is one of the most important offensive weapons of the Red Army. One can say, in fact, that to-day the Red Army has a monopoly of the mass use of cavalry under conditions of modern warfare. With its 34 Cavalry Divisions in peace-time with 2 to 3 Brigades of 2 Regiments each, Soviet cavalry is stronger than the cavalry of Germany, France, Poland, Italy and Japan together. Whereas in the West, in Great Britain and France, cavalry is well on the way to being completely unhorsed and turned into lightly motorised formations, massed cavalry remains in full existence in the Red Army and it retains its own special tasks. Whereas in Poland, which has the second strongest cavalry army in Europe, cavalry represents a substitute for motorisation, in the Red Army it represents a supplementary arm for use with motorised units.

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[1] Budienny, "Red Cavalry", in the "Bolshevist", No. 4, 1935, p. 38.

Red cavalry has a double purpose:

It is used as an independent arm for offensive purposes, and in this case it is used as the core of the troops with which it co-operates. Field Service Regulations 1934 declare:

> "Strategic cavalry with its considerable strength in arms and technical equipment (machine-guns, artillery, tanks, armoured cars, and aeroplanes) is well able to carry out various tasks in battle (attack, defence, reconnoitring, raids) independently."

This idea has been expressed still more clearly in Soviet military literature:

> "In future wars cavalry will be given very responsible tasks to perform. Cavalry formations strongly supported by aeroplanes, tanks and armoured-cars will have operative-strategic tasks to perform: wide encirclement of the enemy, and the capture of his most important strategic, economic and political centres—as well as tactical tasks: the final disorganisation and destruction of retreating and defeated enemy troops." [1]

This was the case when the army of Deniken was destroyed in the civil war, and it was also the case during the Russo-Polish War when the chief forces of the Red Army on the South-West front consisted of cavalry supplemented by weak infantry formations, and of course at that time on a low technical level. To-day the Red Army has much greater masses of cavalry ready for action and they are equipped with the last word in military technique. Such masses of cavalry represent a very powerful offensive weapon in the territorial conditions of Eastern Europe. The prominent Soviet military theoretician, Svietshin, points out very correctly:

> "Cavalry has not an intrinsic value, but one related to the territorial conditions in which the war is fought and in which cavalry will have to operate."

During the autumn manœuvres in West Russia in 1936 there was one phase of the struggle in which cavalry appeared as the core of an army, supported by tank units and aeroplanes, and a new combination of arms for future warfare became evident. Together with tank units and motorised infantry, the Red Army has powerful cavalry formations, a highly mobile weapon for an offensive blow or for manœuvring.

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[1] "*Voina i Revolutsia*", September–October 1933.

At the same time cavalry in the Red Army is trained to co-operate closely with tanks, and it has its place in the decisive operations of the powerful moto-mechanised units. It is the task of cavalry to follow up tank attacks, to occupy captured territory and mop up isolated enemy posts. It must never offer a good mark to the enemy, it must be highly mobile and be used against the man-power of the enemy whilst the tanks are destroying his fire concentration. In such a combination of arms the operation of pursuit can be carried out rapidly and with all energy, and the exploitation of successes can be carried out at top speed.

The Soviet Commander Krivoshein writes as follows in a book which was translated into German and created a sensation in German military circles, which regard it as a pioneering effort in the tactics of modern warfare:

> "Just as for cavalry, the pursuit of a defeated enemy is one of the most fruitful tasks of mechanised troops. The great mobility of cavalry is supplemented by the impetus and manœuvring capacity of the tanks, and therefore a mixed formation of cavalry and mechanised troops represents a very effective instrument of pursuit." [1]

The Red Army has rehabilitated the cavalry; the rider of the plains now takes his place, with modern equipment, side by side with the mechanised unit.

6. ARTILLERY AND CHEMICAL WARFARE

Red Army artillery is on a very high level, and it is also very strong numerically. According to German and Polish sources [2] in 1935 the Red Army had 100 regiments of light artillery. According to the figures of the League of Nations the Red Army had 30 regiments of heavy artillery in 1931.

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[1] Krivoshein, "*Taktik schneller Verbände*", published in a German translation by the Voggenreiter-Verlag, Potsdam, 1934.

[2] German "*Die Rüstung der Welt*" and Polish "*Przeglond Artilleriski*", a military journal.

At the beginning of 1935 it was reported to the VII Soviet Congress that since that date the strength of Red heavy artillery had been doubled. We may assume that the years 1935–38 saw further very considerable increases in artillery strength in the Soviet Union as part of the general increase in military effectives and of the intensification of general armaments. We can therefore reckon with between 60 and 80 regiments of heavy artillery for 1937–38. The Red Army undoubtedly possesses the greatest concentration of artillery of all kinds of any army in the world, and at least twice as great as the next strongest artillery park, that of the German Army. The "*Militärwissenschaftliche Rundschau*" of September 1938 publishes a review of the artillery arms of the great powers, and according to its figures the Red Army's artillery park is bigger than the artillery parks of the French, British, Italian, Japanese and Polish Armies put together. According to figures given by Colonel Makhine in his book "*L'Armée Rouge*" (Paris 1938, Editions Payot, p. 186), the Red Army enjoys a similar superiority in heavy artillery.

The question of quality is of course of vital importance. To judge from the observations of foreign artillery experts the quality of Soviet artillery is up to the highest standards, and the statement of a high officer of the Red Army, Divisional Commander Bondar, that the guns of the Red Army have the longest range would seem to be correct.[1] Let us consider three main types of gun. The 76mm. field-gun in use in the Red Army has a range of 13 kilometres, whereas the German 77mm. field-gun has a range of between 10 and 11 kilometres only, and it was towards the end of 1934 before the British Vickers-Armstrong Works constructed a field-gun with a range of 13 kilometres. The Soviet anti-tank gun of 37mm. has a longer range than the British 47mm. Vickers anti-tank gun: 7·2 kilometres as against 6·8, and longer than that of the new Swedish anti-tank gun (Bofors model) with a calibre of 37mm.: 6 kilometres. The Soviet anti-aircraft gun of 105mm. has the longest range of any known anti-aircraft gun in Europe, namely 18 kilometres with trajectory and 13 kilometres vertically,[1] whilst the Swedish Bofors gun of a similar calibre, one of the best and newest models, has ranges of 16.5 and 11 kilometres respectively. The muzzle velocity of the Soviet gun is also greater.

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[1] In the "*Kraznaya Svesda*", December 18th, 1936.

With regard to motorisation, the artillery of the Red Army undoubtedly takes first place. The heavy artillery, the anti-tank and anti-aircraft batteries are already fully motorised, and the medium and light artillery are partly motorised. The widespread motorisation of the artillery is thus in accordance with the general high level of motorisation in the Red Army, and keeps pace with the mechanised units and the motorised infantry in this respect. Great attention is paid in the Red Army to the specialised light artillery units, for instance the anti-tank and anti-aircraft batteries. The anti-aircraft batteries are equipped with a wide assortment of guns of various calibres, including the 47mm., the 76mm., the 80mm., and the 105mm. Regimental artillery for anti-tank operations has already been introduced. Reckoned on the known degree of provision with anti-tank guns per unit prevailing in the Red Army, the total number of these weapons available should be approximately 10,000.

Great attention is paid in the Red Army to artillery training, and here too the principle of sniping has been introduced in order to obtain the utmost precision of aim. Referring to progress achieved by 1935, the "*Kraznaya Svesda*" writes:

> "The artillery has now a very considerable number of sniper guns for anti-tank operations, and in comparison with 1934 the number of such guns has increased several times over."

And, referring to the anti-aircraft artillery, it writes:

> "Shooting at aeroplanes flying at a high speed at great altitudes, night shooting, shooting at rapidly varying ranges at manœuvring aeroplanes, etc., are all in the daily practice of the anti-aircraft artillery."

The use of artillery as an offensive weapon, its introduction into the mobile shock army, and its full utilisation in modern battle have probably been developed further in the Red Army than in any other army in Europe. Red artillery has been carefully trained to co-ordinate its activity with that of the tank units and the air squadrons. The new Field Training Manual and Tactical Instructions for the artillery provide for the concentration of big forces of heavy artillery in special groups for "long-distance effect".

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[1] In the "*Artilleristische Rundschau*", May 1936.

For some years now the Red Army has also possessed a chemical arm which is highly developed both technically and organisationally. The leading German theoretician on chemical warfare, Hanslian, wrote even in 1933:

> "The Russians have systematically developed their war chemical arm, and introduced it into the general framework of their army organisation with considerable success." [1]

It is interesting to note that whenever German expert literature wishes to give an example of exemplary organisation of the chemical arm it refers to the Red Army. The Soviet chemical troops are formed into special detachments, and trained chemists accompany the troops in order to give timely warning against areas which have been gassed. There is no doubt that the Soviet chemical arm is closely acquainted with all the methods of modern chemical warfare and that it has thoroughly mastered all chemical processes for use in modern warfare, including the use of gas shells by the artillery and by mortars, the dissemination of gas from containers, the use of arsenical smokes, and all forms of gas attack by aeroplane, including the dropping of gas bombs, the spraying of liquid gas, the laying of smoke screens, the gassing of whole areas by manual apparatus and by chemical mines exploded from a distance, and finally, the motorisation of the chemical arm. A Polish military journal writes: "In any future war Soviet Russia will operate with great quantities of chemical means," and adds that amongst the many chemical resources at the disposal of the Red Army are the deadliest vesicant and low-temperature gases.[1] There is no doubt that the organisation and technique of chemical warfare have been more highly developed in the Red Army than in any other European army. The German chemical industry can produce more than the Soviet chemical industry, but the Red Army has a double advantage over the German Army even in this respect. First of all it began to develop the chemical arm much earlier, and therefore it has greater experience, and secondly it has a tremendously powerful air arm. The chemical arm is not very effective on its own, and the method of gas discharge used during the World War was very primitive and very dependent on the vagaries of wind and weather. In order to affect the enemy thoroughly gas needs a "medium": artillery or the air arm, though the importance of artillery as a medium for gas attacks is steadily decreasing in comparison with that of the air arm. This fact was recognised earliest in Soviet military literature, which points out that in future warfare the artillery will in all probability be used for disseminating gas only where aeroplanes and chemical troops cannot be used. In future warfare the superiority in gas warfare will not necessarily fall to the side which is able to produce most gas, etc., but to the side whose air force is able to disseminate most gas over and behind the enemy lines. To-day chemical warfare has become fundamentally a matter for the air arm. The side which has superiority in the air can damage its enemy most effectively with gas.

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[1] Hanslian, "*Die Entwicklung der chemischen Waffe in der Nachkriegszeit*", in "*Wehrgedanken*", Hamburg 1933, Part II, p. 54.

A detailed and objective examination of the equipment of the Red Army shows clearly how erroneous is the idea that it is capable of defensive operations only, and is therefore not a valuable ally. On the contrary, modern weapons of offensive represent the nucleus of Red Army equipment, represent its special capacity, just as during the World War the German Army excelled in heavy artillery and infantry action, and the French Army in its field artillery and fortifications. And part of this special capacity of the Red Army is the ability to co-ordinate the activities of all these weapons

[1] "*Przeglond Piechotny*", August 1937.

of offensive. During the autumn manœuvres of the White-Russian, Kiev and Moscow military districts combinations of various arms were demonstrated in forms which were either unknown altogether in other armies or known in theory only, for instance the co-ordination of tank and aeroplane action on a mass scale, the co-ordination of masses of cavalry with moto-mechanised units, and the co-ordination of all the elements of a powerful and mobile shock army, including the air arm, the tank corps, cavalry and motorised infantry.

CHAPTER IV

RED STRATEGY

1. TERRITORIAL CONDITIONS, TECHNIQUE AND NUMBERS

IN THE RED ARMY the military leaders of the Soviet Union have a weapon of tremendous striking power. How and where is it likely to be used?

The strategical use of military strength is largely decided by the military doctrine of the country in question. In this way strategy becomes an important component part of the army, in fact its regulating principle. The strategy of the Red Army is a function of numbers, modern military technique and the territory of Eastern Europe. These are its preliminary conditions, the material elements on which it must build. Adaptation to the territorial peculiarities of Eastern Europe both in technique and training means mobility. Red strategy has therefore all the elements of what Napoleon once declared to be the strength of an army: "numbers multiplied by mobility". The General Staffs of Western Europe have neither the same numbers nor the same territorial conditions in which to operate, and this explains the difference in strategical ideas. The difference in territorial conditions probably determines the divergence even more than the difference in numbers. The Italian General Graziolli, who was a close observer of the first stages in the rapid rise of the Red Army, correctly estimated the effect of territorial conditions on military strategy, and referring to Red strategy he writes:

> "The prevalence of almost limitless plains, and the lack of any suitable strategic strong points determine this dynamism and vast manœuvring, which so perplex the mechanical ideas of the ordinary European commander." [1]

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[1] In the "*Temps*", October 14th, 1934.

A strategic revolution has resulted from the adaptation of the Red Army to the territorial conditions of Eastern Europe, and its mastery of them. This revolution will have its effects on the whole politico–military situation in Europe.

The old-time Russian strategy is dead, and the new Russian strategy is its antithesis in all respects. The bloody defeats of the old Russian Army in the Russo–Japanese War and in the World War were caused not only by its technical backwardness, but also by its weak, irresolute and irresponsible leadership. Since the Russo–Turkish War of 1877 the Russian Army has never practised an offensive strategy. Russian strategy during the World War was incapable of using the trump cards it held: numerical superiority over the enemy and the vast spaces at its disposal.

Two factors have had a revolutionary effect on the development of modern Soviet strategy: the lessons of the civil war and the possibilities of modern technique. The Italian General Graziolli points out that the civil war was an excellent school for the leaders of the new army; it caused them to free the army from the shackles of outworn military dogma, and to develop a strategy of daring manœuvre. Red strategy during the civil war was improvised on the spot to meet the requirements of the moment, Red military technique was backward, and administrative organisation was improvised, but for all that Red strategy was vastly superior to that of the old Tsarist army leaders. Such operations as the double break-through near Orel and Voronesh–Kastornaya in the late autumn of 1919 against Denikin, the enveloping movement against Wrangel in the Crimea towards the end of 1920, and the big break-through on the Polish front near Kiev in June 1920 were all characterised by great strategic élan, and the way in which massed cavalry was used in these campaigns already has its place in the history of warfare.

The mastery of modern military technique obtained later by the Red Army gave the new dynamic doctrine of military offensive a powerful material basis. Red strategy was probably the first in Europe to develop a working idea of future warfare, and now it has set itself the task of using modern military technique to the full for a policy of military offensive. The Red Army was equipped with modern technical resources, a strong air arm and moto-mechanised units several years before the other armies of Europe, and its strategy is now developing on the basis of new experience. The task which now faces Red strategy is to carry the revolution in military technique into the art of operative strategy.

2. THE REVOLUTION IN THE ART OF WAR

Red strategy has its own uniform guiding principles, and they are, so to speak, codified in the Field Service Regulations drawn up in 1936 and put into force in February 1937.

Red strategy is definitely a strategy of the knock-out blow aiming at the destruction of the enemy.

The new Field Service Regulations declare:

> "The military operations of the Red Army will be conducted with a view to destroying the enemy. The fundamental aim of the Soviet Union in any war which is forced upon it will be to secure a decisive victory and utterly overthrow its enemy. . . .
>
> "The enemy must be caught throughout the whole depth of his positions and there encircled and destroyed."

These are not mere phrases. The idea of destroying the enemy and manœuvring successfully can be found in the Field Service Regulations of all armies, including even those of Poland and Japan, whose offensive resources are definitely weak. However, the methods proposed by Red strategy are completely in accordance with the material and technical resources of the Red Army. The knock-out strategy of the Red General Staff is based on the efficiency of modern weapons of offence, which create all the conditions for such a victory. Modern weapons of offence give the stronger power an incomparably greater superiority than was the case in former wars. Where an aggressor has a definite superiority in the air, in moto-mechanised units and in motorised heavy artillery, etc., the victim of his aggression is helpless; he can hardly protect his flanks and rear, and his final defeat must be complete and absolute. A strategical offensive carried out with modern weapons must have an élan and impetus unknown in former days. Tannenberg was child's play in comparison with the Cannae of the future. Red strategy is well aware that modern weapons of offence fundamentally alter the character of military operations. Break-through operations, encirclement, and attack along concentric lines will be carried out in the future with other means, at a different tempo and with different results. In the present age of army motorisation, modern air power and enormously increased fire-power, an encirclement can be carried out on a bigger scale, a break-through can be driven deeper, and the final decision obtained quicker than ever before. Once he is forced to retreat the enemy cannot escape the pursuing aeroplanes and moto-mechanised units, and they will quickly cut off his communications with the rear; an enveloping movement must rapidly develop into encirclement; and a reverse and defeat into final destruction. Big and orderly retreats such as that of the Russian Army before the advancing Germans in 1915, and that of the Polish Army before the advancing Red Army in 1920 will be impossible in future warfare. Red strategy has abandoned the old antithesis of offensive and defensive weapons, and at the same time it has abandoned the antithesis between offensive and defensive tactics. It has resuscitated the old principle of Clausewitz that effective defence is nothing but the preparation for a successful offensive. Modern weapons of war are overwhelming weapons of offence, i.e., defensive operations will be conducted with weapons of offence, and the leading Soviet military publication [1] writes that an army on the defensive must be in possession of all those arms which the attacking army is likely to use against it. Modern weapons are in a position to give the defence a great superiority over the attack, and create the possibility of a lightning counter-offensive, and Red strategy demands that any attempt at an enveloping movement on the part of the enemy should be answered with all possible determination and energy by a counter-manœuvre to crush the would-be enveloper and deliver a decisive concentric counter-blow in flank or rear.

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[1] "*Voina i Revolutsia*", November–December 1934, p. 150.

The superiority necessary for delivering a decisive blow must be created by the requisite concentration of forces, and the new Field Service Regulations declare:

> "It is impossible to be equally strong everywhere. To guarantee success troops and war material must be deployed in such a way that superiority is obtained at the decisive points. On sectors of secondary importance all that is necessary is the employment of sufficient forces to hold the enemy."

And the aim of this superiority is laid down as follows:

> "Only a decisive offensive at decisive points followed up by ruthless pursuit can lead to the complete destruction of all enemy forces and resources."

Red strategy aims at avoiding any dissipation of forces. The numerical superiority enjoyed by the Red Army over any European enemy or even coalition of enemies, is to be increased still further by a deliberate concentration of forces at decisive points. The aim of Red strategy is to secure an intensified superiority by the concentration of forces in a decisive offensive, i.e., the assembly of powerful shock armies. To use a term popular in German military technology therefore, Red strategy is definitely a strategy of decisive fulcra. Modern technique, and in particular the air arm and the moto-mechanised units, can be more easily and rapidly concentrated than the infantry masses and heavy artillery of the World War, and the numerical superiority which the Soviet Union will possess over its possible enemies in men, aeroplanes and tanks will be increased by the formation of mobile shock armies intended to break down all possible resistance. The air arm will play a very important role in this:

> "The biggest success will be obtained by aeroplanes when they are used in large numbers and concentrated in time and place against those objects which are of greatest importance for obtaining a decision."

The utmost possible effect of offensive action and concentration will be obtained by the co-operation of all arms. The new Field Service Regulations demand this imperatively:

> "Each arm must be used in battle with careful regard to its peculiarities and its strong points. Each arm must operate in the closest possible co-operation with all other arms, and each arm must be used under the conditions most favourable for developing its possibilities to the full."

Modern weapons of offence must thus be used on the principle of "division of labour", in combination with and supplementing each other. Red strategy is a strategy of synthesis, and it excludes the over-estimation of one arm and the under-estimation of the other. Red strategy carefully avoids the one-sidedness which has produced the military schools of Douhet, Fuller and Seeckt. At the same time the Red Army has undoubtedly the biggest and most varied arsenal of modern weapons. Not only has it enormous man-power, and powerful air and tank arms, but it has practically a monopoly of certain kinds of offensive weapons: strategic cavalry and air infantry. Other armies do not possess these arms at all, or only in small numbers and insufficiently equipped. The effect obtained from a combination of numerical strength with a great variety of offensive weapons must be very great.

The proclamation of the principle of the knock-out blow by Red strategy is not a mere declaration: its methods are analysed and made obligatory on the Red Army. The enemy front is to be destroyed throughout its depth and including its basis of operations.

The new Field Service Regulations declare:

> "Modern technical means permit the simultaneous defeat of the enemy along the whole of his battle front and throughout the whole depth of his position. The attack must encircle the enemy and totally destroy him."

"Throughout the whole depth of his position", means that his reserves must be destroyed too, that his base communications must be cut off, and that the whole area through which he receives food and supplies must be disorganised and occupied. The whole defensive position of the enemy in its entire depth must be destroyed. Red strategy is a strategy of depth in the sense that it provides first of all for the deepest possible stratification of its own front and the concentration of its own attacking forces (co-ordinated arms of all kinds) to a great depth, and secondly for a powerful blow at the enemy right through his whole front deep into his basis of operations. It launches its attack from depth into depth. For the carrying out of this aim it possesses technical means very different from those of the World War. The organ of the People's Commissariat for Defence[1] commenting on Red Army Tactical Instructions points out that in the World War even the heaviest attacks on the biggest scale did not succeed in destroying the defence throughout its whole depth. By the time the attack had gradually broken through the first lines of defence, the enemy had already rushed up reinforcements to the threatened positions and filled up his front line. Modern military technique, however, offers the possibility of solving the problem and destroying the defence throughout its entire depth.

Red strategy formed a practical idea of the character of future warfare before the military experts of other countries, and it developed it more thoroughly. Red strategy has studied the uses of modern weapons of offence precisely with a view to obtaining this decisive victory, and the new Field Service Regulations of the Red Army declare:

> "Modern technical means of reducing the defence (above all tanks, artillery, aeroplanes and mechanised units, when used on a mass scale) make it possible to organise a simultaneous attack on the enemy throughout the whole depth of his position, to isolate him, to encircle him completely and finally destroy him."

This is the general framework in which the individual tasks of the various arms are determined in the Red Army.

The Red Army has tank formations intended for the conduct of independent offensives, including tank units designed for action over a wide radius, and moto-mechanised units of tanks followed up by motorised infantry and motorised artillery. The object of the first-mentioned group of tanks is to break through to the main lines of communication of the enemy, to deliver an annihilating blow at his reserves and at his staff, to destroy the main concentrations of his artillery, and to cut off the line of retreat of his main forces. The moto-mechanised units, referred to in the new Field Service Regulations simply as mechanised units and even mechanised "Landing Corps", are intended to stage a break-through amongst the retreating troops of the enemy, to attack them from the rear and cut them off from their base.

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[1] "*Kraznaya Svesda*", February 17th, 1937.

The air arm will take part in the battle in close co-operation with the advanced tanks, and it can carry the attack farthest into the enemy lines; it can disorganise his lines of communication, isolate him from his rear base of operations and prevent his supplies from coming up.

The artillery will not confine itself, as in the World War, to hammering away at the positions of the enemy. In the Red Army this task devolves on one particular group of artillery, so-called "Destructive Artillery". The major part of the artillery belongs to the "Long-Range Operations" group. This is the artillery which, thanks to its enormous range, can push forward the artillery attack into the deepest reserves of the enemy, bombarding his staff headquarters, destroying important traffic junctions and silencing his own artillery. Thanks to wide-scale motorisation, artillery has ceased to be tied down to any one base of operations. Motorised artillery supports advancing troops, it puts up the necessary creeping barrage and becomes a mobile weapon of offence.

A rapid advance will receive full support from the base. Motor and aerial transport ensures the greatest possible mobility and the uninterrupted supply of the advancing troops with all their requirements; even the base is mobile and units operating in the rear of the enemy can be supplied. Red strategy aims at complete victory by the combination fo all arms, by the co-ordinated use of numbers, great fire-power and mobility. The pursuit and complete destruction of the enemy are the necessary development of the battle, and the combined effect of all arms must be used for this final and complete destruction of the enemy front. The combined effect of the air arm, the tank and mechanised units, the mechanised and air landing corps, modern strategic cavalry, advancing motorised artillery and advancing infantry supported by their own tanks must break down all the defensive positions of the enemy.

The leading organ of the Red Army describes the final phase of an offensive conducted according to the principles of Red strategy as follows:

> "The enemy is defeated and seeks to withdraw from the battlefield, to preserve his forces intact and save his equipment and stores. However, his line of retreat is cut off by long-distance tank units, and by mechanised and air landing corps, which have penetrated deep into the territory behind his front line. Everywhere the demoralised enemy is met with the fire of attacking units which have broken through his flanks and taken him in the rear. The encirclement closes in more and more tightly until finally the enemy is compelled to lay down arms."

If an army in Eastern Europe is defeated by superior numbers and a superior weight of modern arms, then it will have no possibility of retreat or even flight: it will be faced with the alternatives of complete surrender or complete destruction.

3. REALISTIC STRATEGY

At the same time Red strategy never ceases to be very definitely realistic, and it sternly rejects all hazardous adventures and all irresponsible risks. It intends to pursue a policy of scientific offensive, and all its calculations are made very carefully indeed.

This extraordinary care can be explained in part by historical experience, by the bitter lessons of the lost war against Poland. One might say that the leaders of the Red Army have a "Vistula complex", but it is one whose effects are very salutary. The commanders of the Red Army have been educated in a strategy of uncompromising realism and extreme care, always with the memory of the lost battle on the Vistula in their minds. At least three lessons were learned from this defeat, and to-day they belong to the firm principles of the Red General Staff.

Numerical and material superiority over the enemy must be organised as rapidly and as decisively as possible. The Red Army had no such superiority in 1920.

An offensive must never be conducted as a mere pressing back of the enemy as was the case on the West front in 1920. The task of an offensive must be to obtain a decisive victory by annihilating blows delivered at the flanks and rear of the enemy.

The uninterrupted maintenance of supplies, and the complete organisation of all base operations represent the conditions *sine qua non* of successful warfare. The Russian offensive before Warsaw in 1920 broke down partly because it was impossible to observe these rules and partly because they were neglected.

Soviet military realism is not confined to questions of tactics. The apparatus of modern warfare in Soviet military theory is a combined process of production and transport, and Red strategy is made dependent always on material and organisational conditions. Modern warfare is regarded to some extent as a feat of engineering.

"The war apparatus of the army is analysed like a 'factory', and in the same way technique and labour-power are considered decisive for producing results," declares the German journalist Just concerning the ideas of the Red General Staff. The process of rationalisation has been extended from the war industries to the army itself by introducing strict norms of equipment, training, technical skill, etc. The classical work of Soviet military literature, Triandofilov's "The Character of Modern Army Operations", which appeared in 1928, presented modern warfare as a problem of serving the front line uninterruptedly, as a problem of supplies and transports.

It is absolutely impossible that the leadership of the Red Army should ever abandon these principles and neglect the material basis of the army or fail to develop it to the utmost.

Another characteristic feature of the same order is the stern warning of Red strategy against any one-sided over-estimation of any individual arm. Despite its own decided attachment to modern military technique, it is well aware of the limitations of each individual weapon of offence. The Red Army has the strongest air arm in the world, but it refuses to regard air power as decisive in warfare, and it strictly rejects the theory of General Douhet that air mastery is identical with victory. The Red Army has the strongest tank arm in the world, but it refuses to accept the theory of General Fuller that the tank is the decisive element in the winning of victory.

N. Shuravlev writes:

> "Modern air forces are not the decisive factor in battle compared with the volume of operative tasks set to modern mass armies." [1]

And Entch writes:

> "The errors in the fundamental theories of Douhet are evident. At the present stage of air technique and tactics it is impossible for any power to obtain absolute mastery of the air, particularly in a war against a power or group of powers which possesses a highly-developed aero-industry." [2]

The same is true of the tank arm, and Sediakin, formerly Second-in-Command of the Red General Staff, declares:

> "The particular fighting qualities of the tanks must not be over-estimated. . . . Tanks have tremendous striking power, but only when they are strongly supported by infantry and artillery under favourable circumstances."

Naturally, this does not mean that the leaders of the Red Army have any intention of abandoning modern weapons. On the contrary, precisely because they recognise the limitations of each individual arm they are striving first of all to obtain the maximum quantities of all modern weapons in order to increase their possibilities, and secondly to use these modern weapons in the closest possible co-ordination with each other. And in particular they are striving to obtain the greatest possible number of modern weapons of offence because they are well aware of the effectiveness of modern defensive weapons, and they calculate the necessity of reducing such means of defence in their plans.

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[1] N. Shuravlev, "Operative Concentrations ", in "*Voina i Revolutsia,*" November–December 1935.

[2] Entch, "Foreign Opinions concerning the Role of Aviation in Modern Warfare ", in "*Voina i Revolutsia,*" September–October 1935.

One feature of Red strategy is worthy of special attention. The sudden surprise attack, the dream of obtaining a lightning decision in war, finds no place at all in Red strategy, whereas it represents the very spirit of German strategy. Red strategy places no reliance whatever on such surprises, and it draws a strict distinction between the strategic offensive and the surprise attack. In this respect Red strategy is a much better representative of the finest traditions of Clausewitz than are the present-day strategists of National Socialist Germany. Clausewitz declares: "It is a very gross error to think that an attack must always be sudden." Unlike modern German strategy, Red strategy refuses to stake all on obtaining a quick decision; it is a strategy of many phases, and it refuses to expect miracles even from the most ingenious war plan. On the contrary, it reckons with the possibility of long and determined resistance on the part of the enemy.

A Soviet military expert writes as follows:

> "Modern warfare is not like a boxing match in which the better man knocks out his opponent suddenly with one blow. In war an uninterrupted flow of strength and energy is necessary in order to beat the enemy to his knees." [1]

This well sums up the essential difference between German and Red strategy. Red strategy reckons with the possibility of steadily growing resistance on the part of the enemy; it is a strategy of endurance, and G. Isserson writes:

> "Resistance has a tendency to increase, and it reaches its culminating point at the strategic zenith when the attacker is nearing

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[1] In "*Kraznaya Svesda*", August 21st, 1935.

his object and is compelled to stake everything on his offensive. . . . The weakening of an offensive is usually due more to the increasing strength of the defence than to the exhaustion of the attacker. The greatest expenditure of energy and the approach of the crisis must be expected towards the end. The genius and the firmness of operative leadership demonstrates itself by foreseeing this decisive moment and seizing on it with a new wave of operative efforts and in full possession of all the forces and material required to complete the operation successfully." [1]

And Sediakin says the same thing:

"Withdrawing to his own strategic base the enemy has more time to rally and concentrate his forces, and in the upshot he may prove stronger than the first wave of the attacking forces unless the latter have drawn on their reserves."

It would be difficult to utter clearer warnings against ill-considered offensives.

The logical conclusion to be drawn from all this is not an abandonment of the offensive, but that an offensive should be thoroughly prepared, including the organisation of an effective superiority over the enemy, and one which must not be relinquished throughout the course of the battle, the campaign and the whole war itself.

Red strategy does not confine itself to an analysis of a model battle, but embraces the whole period of the war. The plan of battle is nothing but a temporary situation which arises during the conduct of the war as a whole. The act of battle is part and parcel of the gradual growth of economic and strategic exertion. Man-power and economic resources are harnessed into the prosecution of the war. As a result, permanent mobilisation and strategic reserves tend to become the central conceptions of Red strategy, which can claim that it has mastered the theory and practice of totalitarian warfare to a far greater extent than has German strategy.

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[1] G. Isserson, "The Evolution of Operative Strategy" (Russian), Moscow 1932, pp. 49 and 52.

4. RED STRATEGY FACES WESTWARD

Strategy depends on territorial conditions; it is tied down to given territorial aims and a given relation of forces. The Red Army has not only its own military doctrine, but its own strategy in the narrower sense of the term.

The problem of two-front war does not exist for Red strategy in the way it does for German strategy. A war against Germany and Japan would not mean the same thing for the Soviet Union as a war against France and the Soviet Union would mean for Germany. There would be no possibility of effective connections between the two fronts for the Soviet Union. The Far Eastern front would be of purely local importance and it would be supplied with war materials by the newly-built and powerful industrial complexes of the Urals and Siberia, and with man-power by the same districts. The Far Eastern Red Army is completely independent of European Russia both economically and militarily, and the task of providing it with all it needed both in men and material would not deplenish the available reserves on the Western front or interfere in any way with the fighting strength of the Western armies. In other words, a sudden attack on the Soviet Union by Japan would mean hardly any relief for Germany, and the well-known German journalist A. Just warns Germany against over-estimating the military assistance Japan can afford her:

> "It is already possible to argue that a war in the Far East, let us say to the East of Novosibirsk, would have hardly any effect on daily life here. The Special Far Eastern Red Army has built itself up as an independent State and it is in possession of all the necessary resources. In the event of a war in the Far East European Russia need hardly feel more of its effects than a neutral country bordering on the frontiers of a belligerent. . . . The Special Far Eastern Red Army is probably largely independent of connections with Russia proper West of Lake Baikal and over the Trans-Siberian Railway. With this the popular idea is refuted that the Soviet Union could not wage a war in the Far East without seriously endangering her whole economic order owing to the unfavourable transport position." [1]

[1] A. Just, "*Militärmacht Sowjet-Union*", Breslau 1935, pp. 60 and 72.

It is not so much a matter of the special position of the Far Eastern Red Army; the corollary is more important: with the exception of this shock army and its industrial basis in the Far East, the whole forces of the Red Army face Westward. Red strategy is meant for use in the West, and all the economic resources and man-power from the Urals Westward are intended for use on the European front. Two points are important: the war preparedness of the Red Army is greater than that of any other army in Europe, and it is stationed for immediate action on the Western frontier. The cadre Divisions are already at full war strength and they can be sent into action immediately without any preliminary mobilisation. The last known information concerning the location of the Red Army dates from 1932, when over two-thirds of the Divisions in European Russia were concentrated in three frontier districts: Ukrainia, White Russia and Leningrad. The changes which have taken place since then have all tended to strengthen the troops in the frontier districts, and in these districts the troops have been moved even nearer to the Western frontier. This change in location was announced at the beginning of 1936. The offensive strength of the Red Army has been increased in this way. A military expert writes as follows concerning the location of the Red Army and stresses its offensive significance:

> "A plan of active offensive drawn up with a view to forestalling an enemy attack demands that the main weight of military forces shall be quartered near the frontier, whereas a strategic defensive plan would permit the troops to be distributed over a wider area."

The concentration of the whole army on the Western frontier can be carried out much more rapidly to-day than was the case in 1914. Compared with the old Tsarist Empire the present frontiers of the Soviet Union are much farther East, and this fact alone shortens the time necessary for the transport of troops to the concentration points in the West by between 7 and 10 days. In addition, the capacities of the railway system are two or three times as great as they were in 1914. And finally, the thorough motorisation of the Red

Army permits large bodies of troops to be moved over long distances very rapidly: at the manœuvres in the Moscow military district in the autumn of 1936 a whole Infantry Division was transported over 150 miles in 24 hours. The time-table for the mobilisation and concentration of the Red Army in the European theatre of war is much quicker than that of the French Army, and may be compared with that of the German Army.

Thanks to its organisational structure and composition, its territorial location, and to the means of transport at its disposal, the Red Army can be thrown into the scales very quickly in the event of European war.

5. POLAND NO BARRIER

One important objection is invariably raised in order to minimise the importance of the Red Army as a factor in the European military situation, and, above all, to minimise the value of the Franco-Soviet pact: the Soviet Union has no common frontier with Germany. The report of Archimbaud to the French Chamber of Deputies, to which we have already referred on several occasions, also contains a hint to this effect. The objection refers to Poland, whose existence between Germany and the Soviet Union is declared to make any direct intervention by a Red Army operating along the shortest and strategically most-important route impossible.

This argument can hardly mean that Poland is militarily in a position to cut off the Soviet Union from Central and Western Europe. The Red Army and the Polish Army are incomparable magnitudes, because the Red Army has ten times the strength in modern arms. The argument is therefore primarily a political one: consideration for Poland might prevent the anti-German coalition from demanding the intervention of the Red Army over Polish territory.

What would be the position in various eventualities? In one case the objection that the Soviet Union and Germany have no common frontier could not be used at all, namely if Poland threw in her lot with Germany in the event of a

German attack on the Soviet Union, or even permitted German troops to pass through her territory on their way to attack the Soviet Union. In this event Poland would be an enemy, and the common Soviet–German frontier would then exist somewhere on Polish territory. Under such circumstances the Western powers could raise no objection to the Red Army's marching through Poland. On the contrary, France and her allies would then be urgently interested in the Red Army's crushing a Poland in Germany's camp as rapidly and as thoroughly as possible, and then driving forward over the Polish frontier into German territory in order to afford France the greatest possible military support.

The situation becomes rather more complicated in the event of Poland's remaining loyal to her obligations to France and affording her assistance in the event of a German attack, but at the same time refusing permission to the Red Army to pass through her territory and lend effective assistance to France too, and even refusing to accept the military assistance of the Soviet Union in her own struggle against Germany. However, this possibility is rather more than improbable, because in the event of a German invasion of Poland, Poland's own vital interests would compel her to accept the powerful aid of the Red Army to defend her Western frontier. Any proud determination on the part of a Polish Government to defend its own territory against a German attack without accepting the assistance of the Red Army would be suicidal, because German and Polish military strength, technique and armaments are incomparable, and a German attack on Poland would very quickly end in the complete occupation of Poland by enemy troops. A Soviet–German front would then be established, but only after the collapse of Polish resistance and the occupation of Poland, and on the Polish–Soviet frontier instead of on the Polish–German frontier. Polish objections to the aid of the Red Army in the event of a German attack would be as absurd as though in 1914 the Belgian Government had refused to permit French troops to cross the frontier to the assistance of the Belgian Army after the German invasion had begun. In addition, the real interests of France would demand Soviet intervention, because in the event of a European war it would be urgently necessary that France should be relieved of pressure by military action in Eastern Europe, and the relatively weak Polish Army is not in a position to accomplish this. The only power in Eastern Europe which could do so is the Red Army operating along the shortest and strategically most important route across the Polish–German frontier. The interests of the Soviet Union also demand intervention. The Soviet Union cannot afford to wait until the powerful German Army has battered down Polish resistance, destroyed the Polish Army and occupied Poland with a view to opening an attack over the Polish–Soviet frontier. Any German attack must be parried at once in co-operation with the Polish Army along the Polish–German frontier, and the repulse of the enemy must be followed by pursuit. The idea that in the event of a German attack France and the Soviet Union would be prepared to respect Polish folly and wait patiently whilst the German Army was battering Poland into submission preparatory to an attack on the Soviet Union from Polish territory flatly contradicts all political realities.

There is a third possibility, namely that Poland might attempt to remain neutral whilst Germany was attacking France, and at the same time refuse permission to the Soviet Union to carry military assistance to France through Polish territory in fulfilment of her pact obligations. Under such circumstances Polish neutrality would represent a clear breach of Polish treaty obligations to France; it would place France in a fatal strategic situation and delay Soviet assistance. If the Soviet Union ignored this pseudo-neutrality it could at least relieve the military pressure on France and perhaps save her altogether. Thus France would have no reason whatever to demand that the Soviet Union should recognise such neutrality.

Three conditions must exist if Polish neutrality is to be maintained and cut off the Soviet Union from National Socialist Germany:

(*a*) Germany must respect this neutrality on her part and confine herself to a war against France;

(*b*) France must respect the neutrality of a country which blatantly violates its obligations towards her, and be prepared to renounce the military assistance of the Soviet Union along the only decisive strategic route; and

(*c*) The Soviet Union must be prepared to leave National Socialist Germany a free hand in Central and South-Eastern Europe, and to watch the Western powers being bled dry, at the same time tolerating a tremendous accession of strength to National Socialist Germany and renouncing all the advantages accruing from her Western alliance.

Each one of these conditions is unlikely, and it is absolutely impossible that they could all exist together.

There is no conceivable situation in which in the event of a European war Poland could immobilise the Red Army and cut it off from the rest of Europe.

6. THE FIGHT FOR HEGEMONY IN EASTERN EUROPE

Red strategy is not bothered by the problem: Germany or Japan? The question does not arise at all: the decisive theatre of war for the Red Army will be in the West against Germany. However, the problem does arise: North or South line? Where is the fulcrum of the Soviet counter-offensive to lie: on the line East Prussia, Pomerania, Berlin, or on the line Silesia, Central Germany? The problem is not a new one for Russian strategy. In their preparations for the World War the Russian General Staff hesitated between two possibilities: Plan A, the offensive against Austria, or Plan G, the offensive against Germany. In 1914 the main weight of the Russian Army lay in the direction of Austria, though no massive and definite concentration was carried out which would have put the matter beyond all doubt. In the Russo–Polish war in 1920, on the other hand, about three-quarters of the Russian forces were gathered on the North-West and West lines, i.e., on the former front against Germany.

What are the offensive and defensive chances of the Red Army on these two fronts? On the North-West front the possibility of a defensive will undoubtedly exist because any German attack on the Soviet Union would be launched there through the Baltic States. The beginnings and elements of a German plan of attack are already visible, and preparations for launching it are in full swing.

The preliminary point of departure lies in the development of the German Navy. The establishment of German mastery in the Baltic Sea is one of the first and natural aims of any German strategy. A powerful German Navy would have the task of providing German strategy with important naval bases and strong points for an air offensive, which in their turn would improve the strategic situation for German land operations. The waters of the Baltic are to become a powerful flank of the German war front against the Soviet Union. National Socialist Germany wishes to fortify the chain of naval bases from the Sund and the Belt over Kiel, Gdynia and the Baltic Islands, Gottland and Oeland, Oesel, Dago and the Aaland Islands, down to the South coast of Finland. German strategy wishes to extend its air bases beyond East Prussia over the Baltic Islands to Finland, and to turn Finland into a base for a ruthless air war against the Soviet Union, for at this point, only a few miles from Leningrad, begins the only zone in which the Soviet Union can be damaged from the air. And finally, National Socialist Germany wishes to develop the huge area from Pomerania to Finland as a basis of operations in a land war against the Soviet Union.

German foreign policy is in accordance with this strategic plan, and it aims at the creation of an anti-Soviet block of Scandinavian and Baltic States under German leadership. German foreign policy is obviously harnessed to military aims here. The German military Press has welcomed a declaration by the Finnish Admiral Schoultz as a programme of military co-operation between the two countries. Admiral Schoultz declared:

> "Everyone knows that the great danger threatening us comes from the East. We cannot compete in armaments with Russia and therefore we must look around for allies."

Germany is then recommended as such an ally, and Schoultz asks:

> "What can we offer Germany in order to make such co-operation valuable to her as well as to us?"

He has no hesitation in naming the first consideration, namely the Aaland Islands, which, in the event of the abolition of the disarmament conditions of 1920, would give National Socialist Germany a dominating position towards the Baltic countries, and a military key position in the very important Eastern section of the Baltic Sea. Admiral Gadow answers this offer fairly openly on behalf of Germany:

> "A Scandinavian community of vital interests already exists from Denmark to Finland, and the question of what can be offered to Germany as an inducement hardly arises." [1]

The answer is too obvious to need much discussion; above all the inducement is the very valuable strategic situation of Finland, which would be of great importance for Germany in the event of naval, air and land action against the Soviet Union. In 1935–36, before Finland decided on a foreign policy of definite neutrality, the beginnings of German–Finnish military co-operation were visible. Finland maintained far more aerodromes than she needed for her own small air force. German officers were serving in the Finnish Air Force. New air fields were laid out along the Soviet frontier. Germany received permission to extend the air line Berlin–Malmö to Hankö on the South-West extremity of Finland. And the continuation of the German air line was the air line Helsingfors–Raiaoki (on the Soviet frontier), a line obviously developed for strategical reasons, because it has no economic factors in its favour at all.

However, the possibilities of German strategic expansion

[1] "*Deutsche Wehr*", April 16th, 1936.

in the Baltic Sea Basin are quite definitely limited. None of the Scandinavian powers and very few of the Baltic powers are willing to let themselves be used as military advanced posts of National Socialist Germany. In 1937 Finland joined the ranks of these powers. These countries can now be turned into German bases only by direct military occupation in time of war. German naval and air bases can be of only subordinate importance in a war against the Soviet Union, which has a deep hinterland even on its North-West frontier. And finally, the decisive factor is the military strength the Soviet Union could concentrate to resist Germany's plans.

Germany will not be really strong at sea before 1940–41, and even then she will not be able to establish complete mastery in the Baltic. And in the best case she will find it difficult to attack the Soviet coasts, because the naval resources of the Soviet Union are considerable. Kronstadt shields Leningrad, and it is practically an impregnable fortress. Coastal defences along the Gulf of Finland are very powerful. The naval air arm of the Soviet Union is strong, probably considerably stronger than Germany's. Since 1933 the naval forces of the Soviet Union in the Baltic have been strengthened fivefold. After 1940 the Soviet Union will possess a strong fleet in the Baltic with powerful ships of the line and fast cruisers (in accordance with the Anglo–Soviet Naval Agreement), and at the moment she is engaged in building ships of all categories. By 1939–40 German naval superiority in the Baltic will be threatened by very powerful Soviet submarine and torpedo-boat flotillas, and even the freedom of movement of the German fleet will be greatly hampered. The Soviet Union has one of the strongest submarine fleets in the world, and by the end of 1936 it had increased in strength by 715% as compared with 1933. The submarine forces of the Soviet Union concentrated in the Baltic are considerably stronger than the total submarine resources of National Socialist Germany. According to an authoritative German source,[1] the Soviet Union had 78 submarines in the Baltic in 1937, whilst at that time Germany possessed only between 35 and 40 submarines altogether, so that in the event of war Germany would have to reckon with an effective blockade of all her Baltic ports by Soviet submarine and naval air forces.

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[1] "*Handbuch der neuzeitlichen Wehrwissenschaft*", Berlin 1938, Vol. III, 1st half-vol., p. 370.

In addition the Soviet Union has numerous smaller warships, torpedo boats and torpedo-boat destroyers of great speed and capacity, and they represent a very effective weapon indeed in the narrow waters of the Baltic. Since 1933 the number of these vessels has been increased threefold. It must also not be forgotten that the Soviet Baltic fleet has two modernised battleships of very considerable fighting value. In view of all these circumstances it is clear the the problem of waging naval warfare on two fronts (in the North Sea and in the Baltic Ocean) is just as insoluble for National Socialist Germany as the problem of waging a European war on land on several fronts. The Soviet Baltic fleet could play a very important role in a European defensive coalition, that of blockading Germany from North-East European waters.

In the air the Soviet Union undoubtedly holds a very definite superiority on its North-West frontier, and the maintenance of this superiority is guaranteed by the numerical and qualitative superiority of its air force as a whole. The zone of this Soviet air superiority stretches from Carelia over East Prussia, and in the event of war it would include Finland and Pomerania. The network of aerodromes and air bases of the Soviet Union reaches up into the Arctic Circle, and this would make a broad flanking offensive possible in the event of a German landing in Finland.

Another very important defensive factor is the existence of a powerful line of fortifications which lie not directly on the Gulf of Finland, but much farther North, beginning at the White Sea, and running through Carelia along the Soviet–Finnish frontier. Thus the flank and the basis of operations of the Red Army on the North-West front are much broader than any attacking German army could have. Whilst National Socialist Germany could attempt an enveloping movement against the Soviet Union only by a landing in

Finland, the Red Army has always the possibility of carrying out a much broader enveloping movement from the North. All the advantages are on the side of the Red Army here: numerical superiority over a German army of occupation in Finland, and over the combined forces of this army and the Finnish Army if the latter joins the German camp; the undisputed command of the air; a carefully prepared basis of operations along the Finnish Eastern frontier, served by important strategic railway lines (Petrosavodsk–Repola and Nedvoisk–Uhtua); and finally command of the sea on the extreme Northern flank between the peninsula of Kola and the North Cape. The Soviet fleet stationed in Polyarnoia near Murmansk covers the seaway to the ice-free harbour of Murmansk, and it can be strengthened if necessary by submarines and light sea-going craft navigating the White Sea Canal from the Baltic. This Northern squadron has an impregnable position on the Northernmost edge of Europe. It gives the Soviet Union a passage to the Atlantic and practically a monopoly of naval power in this zone, and at the same time it provides an important sea basis for the Northern flank of the Red Army.

The most important sector of operations, however, is the decisive triangle: Leningrad, Minsk, Memel. Land warfare would decide the fate of the naval bases between Talinn and Gdynia, as well as the fate of the air bases. The relation of forces would favour the Red Army. According to the last known figures, published in 1932, there were 16 Infantry and 3·5 Cavalry Divisions in the Leningrad and White-Russian military districts. At the same time the troops in the Moscow military district (11 Infantry and 1·5 Cavalry Divisions in 1932) must be reckoned as reserves for the West and North-West fronts, so that there were something like 30 Divisions concentrated in these three districts even then, but since 1932 the effectives of the Red Army have been more than doubled, and the number of Divisions has been increased by about one-third. At the same time territorial location has been altered to some extent by the despatch of further troops into the frontier districts. To-day the number of Cavalry

Divisions in the White-Russian military district alone is 6 as compared with 3·5 in 1932. To-day therefore we must reckon that the Red Army on the Northern half of the front (in the districts from the Baltic to the Pripet) could muster between 40 and 50 Divisions in a very short space of time, and with the mobilisation on a war footing this number would be approximately doubled. These figures also indicate the number of troops National Socialist Germany would have to use on this front: the preliminary figure would have to be 40 Divisions, rising rapidly to between 80 and 100, that is if Germany harbours any serious intentions of an offensive on this front. However, such a concentration of forces in the struggle for the Baltic territory is possible for her only on two conditions: first of all she must have succeeded in localising the war, and secondly she must have decided to throw the main weight of her forces against the North-West Soviet frontier. And even in this case, the German Army could hope for no more than an equality of forces with the Red Army, and under no circumstances for any numerical superiority. Under all other circumstances there would be a numerical superiority on this front in favour of the Red Army from the beginning.

Thus the hard facts show that the idea of a rapid German "advance on Leningrad" belongs in the sphere of strategic fables. An isolated German attack through Baltic territory towards Leningrad would be quite impossible. A quick raid on Leningrad along the coast would be suicide. Any German offensive against the North-West frontier of the Soviet Union must be launched from a firm basis in White-Russia; otherwise it would hang in the air. Any offensive launched against Leningrad from the Esthonian and Finnish frontiers would under all circumstances have to be accompanied and supported by a drive from Dunaburg to Vietbsk, and from the Polish frontier to Minsk and Mohilev. In 1915–17 after their victories and after they had penetrated deep into White-Russia the German armies were hardly able to get as far as Riga on the Baltic North-West front; it was thus on the coastal sector that they lagged behind. The distances involved must also be taken into account: it is over 400 miles as the crow flies from the East Prussian frontier to Narva (the Esthonian–Soviet frontier, the shortest way to Leningrad). At the same time East Prussia is too isolated to represent a sufficient basis of operations. However, the distance from the West Prussian frontier to the Esthonian–Soviet frontier is over 600 miles, or longer than from the Rhine to the Pyrenees, or from the Soviet–Russian frontier to Berlin. In the military political conditions of to-day it is far more a question of the approaches to Königsberg than of those to Leningrad. It is very questionable whether the Red Army would permit the German Army to make an incursion into the Baltic States. After the visits of the Chiefs of the General Staffs of the Baltic States to Moscow in the spring of 1936, and the visits of the Chief of the Red General Staff, Egorov, to the Baltic capitals in February 1937, it seems unlikely that the Baltic States are willing to let themselves be turned into a basis of operations against the Soviet Union. A very cautious military observer like General Sikorski assumed even in 1936 that in the event of war the Red Army would find itself in a very favourable strategic position in the Baltic States and particularly in Lithuania. Writing in the "*Kurier Warszavski*" on May 24th, 1936, he declared that if the Baltic block sought a *rapprochement* with the Soviet Union the military position of Poland in the East would be fundamentally changed. In that event the Polish front in the North would be greatly endangered owing to the hostile attitude of Lithuania, because the Red Army could easily drive Westward into the Grodno-Suvalki area.

In short, the situation in North-East Europe for an offensive of National Socialist Germany through the Baltic area against the Soviet North-West frontier is less favourable than the situation of the Red Army for a counter-offensive.

7. A DECISION IN THE SOUTH-WEST?

A powerful concentration of the German Army is possible on the North-West frontier of the Soviet Union in the Baltic area; it would receive support from the coast and its flank would be covered. In this situation the Red Army may easily be faced with the double task of defensive and offensive action. In the Galician–Polish area, on the other hand, it is less likely that any strong German forces would deploy because here their flank would be uncovered. In order to protect this flank Germany would need to occupy the South-East European basis and hold the coasts of the Black Sea. In this position, however, the Red Army would enjoy tremendous superiority under all circumstances, no matter what strategic variant came into play. For the Red Army, therefore, the offensive is the only possible strategy in this direction.

The territorial location of the Red Army as announced in 1932 was particularly noteworthy on account of one fact: the very definite massing of troops on the South-West front, in the zone of the Kiev military district. Even in 1932 more than half of all troops stationed in the frontier districts were concentrated here. As the North Caucasian military district is regarded as a reservoir for the South-West front there were at least 30 first-line Divisions for use on this front even in 1932, including 22·5 Infantry Divisions and the rest cavalry. To-day, however, the strength of the Cavalry Divisions on this front has been increased to 13·5. As the Red Army has increased its cadre strength since then by more than double, and as the number of Divisions has also been increased, we must reckon with between 40 and 45 Divisions of the standing army on this front, and after mobilisation the number would be increased to over 100. The main weight of modern weapons of offence has also been concentrated on this front, and also the greatest number of mobile units. The autumn manœuvres in the Kiev district in 1936 were carried out almost exclusively by mobile troops: tank units, cavalry and the air arm. The army on the South-West front is therefore very definitely a shock army possessing great striking power and mobility. This army probably represents the greatest concentration of military strength in Europe at the moment, and in the event of European war the Soviet South-West army would undoubtedly be the strongest army group in a defensive coalition of European powers. In fact it is quite possible that the decision in the war as a whole would be fought out here.

The technical and transport situation on this front is definitely favourable to the Red Army. The density of the railway network Southwards from the line Kiev–Voronesh will permit the rapid despatch of troops from the hinterland and the uninterrupted transport of reserves from Northern Caucasia and from the Volga district. If Poland joined the German camp, then the South Polish, Galicia–Volhynia district would become a very dangerous zone for a fascist coalition, not only militarily but also politically. This is the district of a big Ukrainian national minority which tends both socially and racially to amalgamation with the Soviet Union and above all with Soviet Ukrainia. The collapse of the Polish Army and perhaps the break-up of bourgeois Poland might very well begin with an insurrection of the Slav minorities against a Poland bound to the war chariot of German Fascism. These political and strategic dangers threatening a fascist Poland are clearly recognised by the enemies of the Soviet Union, and Colonel Karhanin writes:

> "The operative line Kiev–Lemberg–Cracow leads direct into the industrial heart of Poland, and its loss would create a very critical situation with regard to army supplies. And further, this line goes through districts whose populations are largely Russian, and having been robbed of all political rights they are frankly hostile to the Polish State. . . . In the event of war Poland cannot reckon on loyalty from the population of the Galicia–Volhynia district."[1]

The South-West line also offers the Red Army a better opportunity for manœuvring, and it need not operate against both German Army and Navy in a struggle for the Baltic coast, which would be unavoidable in the event of a North-West offensive. The present Chief of the Red General Staff, Shaposhnikov, reproached the leaders of the Red Army during the Russo-Polish war in 1920 for having attempted to launch the decisive blow against the Poles by an enveloping movement from the North-East instead of from the South of Warsaw.[1] Thus the present Chief of the Red General Staff favours the Southern line.

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[1] Colonel N. Karhanin, "Lectures on the Military Geography of the Soviet Union" (Russian), Paris 1932, pp. 88–9.

The importance of the South-West variant for Red strategy has not been diminished by the Munich Agreement, but, of course, the conditions have changed. Prior to Munich military assistance would have come from this direction, from the base of operations between the Black Sea and the Pripet, for Czechoslovakia, and it was here that a great East-European defensive block could have been formed. To-day it is from this direction that a German drive must be expected and countered. The military hegemony granted to National Socialist Germany by the Munich Agreement gives her the possibility of delivering the next blow either towards the East (Ukrainia), or towards the South (the Balkans and the Near East). The importance attached by the German authorities to the tail end of Czechoslovakia (Ruthenia) indicates aggressive intentions against Ukrainia. However, the basis of operations of the Red Army in Ukrainia is excellently suited not only to defensive, but also to offensive operations. Poland's important war-economic centres lie in this direction, and also her disturbed national-minority areas. An attacking German Army would have an uncovered flank here, and in its rear and along its lines of communication would be many restless foreign peoples: Poles, Ukrainians, Roumanians, Hungarians and Czechs.

Red strategy (the concentration of great forces of highly mobile troops to secure a rapid decision) has greater possibilities of success along the South-West line to-day than the German Army leaders had in the West in 1914, because it is faced with no powerful system of defence fortifications and because it is not constantly threatened with a vital blow in the flank such as Joffre successfully organised and carried out against the German flank in 1914. National Socialist Germany would have no chance of winning a Battle of the Marne from the defensive in this area as France did in the West in 1914.

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[1] Shaposhnikov, "On the Vistula", Moscow 1924.

The World War stressed the great importance of the Russian South-West front, and General Golovin, who was Chief of the Russian General Staff on the Roumanian front during the World War, writes:

> "Final victory in warfare is the result of victory on the decisive front. The very first operations on the Eastern Front during the World War demonstrated that the Galician sector was such a decisive front. Our war plan required the development of a general battle on the South-West front in Galicia in the Cannae form." [1]

A victory on this front would have influenced the whole conduct of the war by the Allies in the West, and Golovin continues:

> "The decisive defeat of the Austro–Hungarian armies in Galicia would have rendered our allies greater service than the invasion of East Prussia did."

A decisive Russian victory in Galicia in 1914 might have had the same effect as the 1918 campaign of Franchet d'Espérey, which rolled up the front of the Central European powers from the East. However, the leadership of the Russian Army in 1914 failed utterly; it was neither materially nor strategically in a position to develop a general battle on the Galician front in the Cannae form, i.e., an operation to destroy the enemy along the classical lines of a broad enveloping movement and a break-through. To-day, on the other hand, Red strategy is in full possession of all the necessary military technical resources and it has throughly mastered the methods of operation which could develop the South-West front of the Soviet Union into a sector of first-class importance for the whole of Europe.

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[1] N. Golovin, "Our War Plan" (Russian), Paris 1936, p. 25.

CHAPTER V

THE MILITARY STRENGTH OF GERMANY

I. NUMERICAL STRENGTH AND TECHNIQUE

GERMAN RE-ARMAMENT ON a big scale began the military-political upheaval which must in the end turn the whole continent of Europe into an armed camp. The creation of the new German Army has set up new standards of armament, and the real strength of other European armies to-day can be judged only by their numerical and technical relation to the German Army. The army of National Socialist Germany has a new structure and a new technique. The same conservatism in military thought which caused even authoritative circles in Western Europe, and in particular in Great Britain and France, to underestimate the strength of the Red Army, has also caused them to underestimate the terrible strength of the new German Army. In the beginning the Western powers were made anxious only by the mere increase in numbers, by the growth in the visible and invisible effectives of the German Army. But soon after that came the shock caused by the rapid development of Goering's air force, and on top of that the fears caused by the formation of powerful German Armoured Divisions. But even then the Western powers had not grasped the full significance of the matter, i.e., that all they had witnessed up to then was just one step after the other towards the development of the maximum degree of armaments possible, a volume of armaments intended systematically to exceed everything the Western powers had ever attained on the military field. The real fighting power of the German Army can be seen only from an examination of its whole structure. The important question is, What combination of arms, technique and numbers are the German military authorities aiming at?

First of all a distinction must be made between the German Army as it exists to-day, and as it will exist in the future. The German Army of to-day with its 54 Infantry Divisions (approximate strength after the increase of February–March 1938) is a cadre army only, and its effectives and its armament level are being steadily increased. At the same time feverish preparations are proceeding to raise an army at full war strength. This army is not yet fully developed, but all its essential elements have been formed. A German mobilisation during the next two years would produce no particular surprises because the armament level and the development of the army at war strength are already fairly visible.

One of the leading German military publications [1] puts the probable war strength of the German Army at a total of 300 Divisions, including 20 Motorised Divisions and 10 Cavalry Divisions, 10,500 tanks and 9,000 aeroplanes.

These figures are not at all fantastic; they merely describe the German Army of to-morrow. In 1918 the German Army consisted of 236 Divisions, but a modern Division needs less effectives owing to its higher level of military technical resources. The figures quoted for tanks and aeroplanes are quite in accordance with the productive possibilities of German industry. In fact, we shall see that these figures must be regarded rather as a minimum for the future German Army. Such army dimensions are hardly credible in the countries of Western Europe, but nevertheless they show a very close similarity to the structure and armament volume of the Red Army.

Germany's military leaders have learned the lessons of the World War. From the very beginning of the war Germany's numerical strength was insufficient to perform the tasks which faced her, and her technical resources failed her. General Ludendorff writes:

> "Eight more Army Corps at the beginning of the war would have guaranteed victory." [2]

However, even according to Ludendorff this was not the whole extent of Germany's lack of troops, and, in fact, Germany could have done very well with millions more. In the same book Ludendorff writes:

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[1] "*Deutsche Wehr*", January 16th, 1936.

[2] General Ludendorff, "*Der totale Krieg*", Berlin 1935, p. 50.

> "At the beginning of the war 5·5 million able-bodied men untrained, 600,000 trained men not called to the colours. . . . Germany put only 54% of her total numbers of able-bodied men into the field." [1]

In 1914 Germany had made no practical preparations for the war mobilisation of her industries. The German Army which was battering at the gates of Paris four weeks after the outbreak of war was very poorly equipped judged by present-day standards: 55 mortars, 2,700 machine-guns and 7,322 guns. Modern war technique was almost wholly absent, and even for 1914 the organisation of communications and signals and the transmission of orders was backward. The German Army had only 218 aeroplanes, and the idea of dropping bombs had not been thought of. To-day Germany's war preparations are aiming deliberately at achieving the maximum possible strength in man-power and military technical resources. All possible reserves down to the last available man are to be ready from the beginning, and from the outset all technical resources are to be thrown into the scales at the very highest possible level of development and in the greatest possible concentration. The aim of German war preparations in 1939 is to organise the biggest possible numerical and technical superiority over the enemy. Germany's enemies are not merely to be taken by surprise, but crushed at once beyond hope of recovery.

The military leaders of National Socialist Germany are creating a totalitarian army for use in a totalitarian war, an army which they propose to make superior in all arms to its enemies, a mass army possessing the strongest air force, the most powerful tank corps, the most modern infantry and the most effective artillery. To what extent can Germany succeed in this endeavour?

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[1] General Ludendorff, "*Der totale Krieg*", Berlin 1935, pp. 49–50.

2. THE GERMAN AIR FORCE

No other army in the world attaches such supreme importance to the air arm as the German Army. The air arm is regarded as the specific weapon of totalitarian warfare; as the long-distance weapon to obtain a decision in a lightning war, to attack and paralyse the enemy in his own country far behind the front lines. Germany's war doctrine stands nearest to Douhet's theory of the supremacy of the air arm; much nearer than Red strategy, despite the fact that the latter has an even more powerful air arm than Germany. Even before Goering rose to power there were strong tendencies in Germany military thought demanding the greatest possible development of the air arm, even at the expense of other arms.[1] To-day the "*Deutsche Wehr*" speaks of "our own decision to utilise the theories of Douhet". And a prominent German air expert, writing in the official organ of the German War Ministry, declares:

> "Technical possibilities exist to-day of shattering the resistance of the enemy country both physically and morally at the earliest possible stage of the war by persistent, sudden and unexpected bombing attacks." [2]

Attempts are being made in Germany to consolidate an air-war ideology by technical certainty, to insist that attack by enemy bombers is as irresistible as the flight of a shell, and that there can be no effective defence against bombing raids. These ideas indicate clearly what importance the German Army attaches to the air arm and what tasks it proposes to give it.

German strategy openly acknowledges its intention of waging time-table warfare in the air, and Colonel von Bülow writes as follows:

> "Only if a country is prepared to make a tremendous financial and productive exertion, for instance in the systematic organisation of war to begin on a definite date fixed in advance, does it

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[1] Buchfink, "*Der Krieg von Gestern und Morgen*", p. 32.

[2] Major E. Bartz, in an article entitled "*Kriegsflugzeuge*" published in the "*Militärwissenschaftliche Rundschau,*" March 1936, pp. 208–9.

appear at all possible to be in possession of completely up-to-date air forces."[1]

That is not the mere statement of a theoretical possibility; it is the proclamation of a practical programme: it means the fixing in advance of the date for the outbreak of hostilities, and the complete mobilisation of the aero-industry in peacetime in order to be able to use the strongest and best-equipped air force at the very beginning. The whole practical prosecution of Germany's air preparations is based on this plan. The structure and the composition of the German air arm will be in accordance with this aim: it is being organised mainly for independent offensive operations, i.e., for long-range attack on the vital spots in the enemy's rear.

Didier Poulain, a well-informed French military writer, declares:

> "The German Air Force is intended for sudden attack and destruction. It will act on its own and with its own aims within the general framework of the war. It will not often be called upon to co-operate with the land forces."[2]

The operative air army, consisting of powerful bombing squadrons, built up by General Wever, the Chief of the German Air Staff, who met with a fatal accident in 1936, represents the nucleus of the German Air Force. Masses of heavy bombers were used for the first time in the autumn manœuvres of 1937. This full-dress rehearsal of the coming war was intended to demonstrate the decisive role of the air arm in modern warfare, and the well-known German military expert Captain von Zeska wrote, commenting on the plan of the manœuvres, that for the first time the air arm would not limit its activities to supporting land and sea operations, but would act independently and carry aerial warfare into the territory of the enemy. And reporting the manœuvres the "*Frankfurter Zeitung*" wrote:

> "The battle was decided in the early afternoon by the intervention of the air arm, which gave the victory to the Blues."

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[1] Colonel von Bulow, writing in the "*Militärwissenschaftliche Rundschau*", December 1936, p. 95.

[2] In the Paris "*Journal*", September 3rd, 1936.

Foreign experts are in agreement concerning the organisational composition of the German Air Force; between 50 and 60% of its first-line machines are bombers. In the meantime Germany used her air arm to a considerable extent in the Spanish civil war. The training of the German airmen proved to be excellent, better than that of the Italians, and the German fighter planes in particular demonstrated very high fighting qualities.

All this raises one of the most important military problems facing Europe to-day. Germany's Air Force is being prepared for use in Western and Central Europe; it is intended to establish the air superiority of National Socialist Germany in these areas.

How strong is the material basis on which Germany hopes to establish this mastery of the air? There is no doubt whatever that since 1936 Germany's war production has risen to second place in Europe after that of the Soviet Union, i.e., it is the biggest in Central and Western Europe. According to Soviet information in 1935, Germany's aero-industry produced about 4,000 machines of all kinds. At the same time her productive plant was being extended with a view to obtaining a potential capacity of 2,000 aeroplanes and 4,000 aero-engines a month. In 1935, however, and probably to some extent in 1936, too, the effectives of the German Air Force and the quality of its equipment were certainly not commensurate with such productive possibilities. The same Soviet sources [1] assumed that by 1937 Germany would have 4,000 war-planes, including 2,600 first-line machines. The disproportion between productive capacity and the effective strength of Germany's Air Force is very marked. It can be explained largely by the low quality of production, the too-rapid development of the aero-industry, and the lack of experienced pilots. Up to 1936 the German aero-industry definitely lagged behind the corresponding industries of the Western powers and of the Soviet Union in the matter of quality, and it had not up to that time succeeded in reaching their level in the production of any type of aeroplane. The advantage in time and experience the other countries enjoyed could not be made up so quickly. The cycle of mass production in series which normally takes about three years had not been mastered by the German aero-industry. The lack of experienced pilots caused the German Air Force to suffer the largest proportion of air disasters in Europe in 1934–36.

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[1] "*Kraznaya Svesda,*" October 6th, 1936, and "*Voina i Revolutsia*", July–August 1935, p. 21.

However, these were troubles of rapid growth and development, and in the course of 1936 the situation altered rapidly. Thanks to co-operation with American, and to some extent also British factories, the defects of German aero-engine construction were overcome, and that was the weakest point of all in Germany. The supercharged aero-engine which Germany lacked now seems to be available. Even in 1936 therefore Germany's aero-industry was on a fairly high level, and it was the first to introduce the crude-oil aero-engine, which has the advantages of greater safety, a wider radius of action and lower fuel costs. Aero-dynamics were highly developed, and the practice of blind-flying and of automatic steering were introduced into Germany military aviation ahead of the Western European powers. Even in 1935 a prominent French air expert, Henri Bouché, prophesied the rise of the German air arm:

> "With the exception of the supercharged aero-engine the German aero-industry possesses to a high degree all the scientific, technical and industrial elements necessary for the development of a first-class air arm. When mass production of the supercharged aero-engine for medium heights begins in Germany it is quite possible, thanks to its highly-developed aero-dynamic technique and to the number and quality of its technical and scientific institutions, that the German Air Force will obtain a certain superiority. With the supercharged and its own automatic steering devices the German air arm will become a factor to be feared."[1]

We may assume that in 1937 the quality of German air material reached the level of the Western European powers and in some respects exceeded it. Even in the second half of 1936 Germany had one or two types which, although they did not outstrip the best products of the British and French aero-industries, could nevertheless stand comparison with them. These were the all-purposes Junkers 86, and the light fast bombers Heinkel 111 and Dornier 17, which had a speed of between 200 and 250 miles an hour. In 1936–37 the German Air Force was completely re-equipped, and all the old types were replaced by modern high-performance machines. The process of renewal taking place in the German Air Force was clearly visible in the Spanish civil war. In the beginning, in the autumn of 1936, the German machines in Spain were definitely of mediocre quality, and the German bombers of the older type, for instance the Junkers 52, proved a failure altogether, but by the spring of 1937 they had been replaced to some extent by more powerful types, including the light fast bombers Heinkel 111 and Dornier 17 mentioned above, which it would seem are now the standard types of Goering's air force.

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[1] Henri Bouché in the "*Revue de l'Armée de l'Air,*" November 1935, p. 1234.

The following factors are of importance for the recent rise to power and efficiency of the German air arm:

It has a powerful and highly centralised productive basis. The German aero-industry has fewer aeroplane and motor factories than Great Britain, France or Italy, but those it has are very big ones with a high level of present production and a very high level of productive capacity. The German aero-industry has thoroughly mastered the technique of mass production, and in this respect it is ahead of the aero-industries of the Western powers and even of the U.S.A.

Since 1936 the German aero-industry has made tremendous strides in the matter of quality, particularly in aerodynamics and in the durability of its aero-engines. The world records set up of late by German planes are of great military importance and they include speed records for fighter planes, altitude records for heavy loads, and long-distance records for hydroplanes. These records indicate the high level of performance to be expected from Germany's bombing and fighting planes, and the great difficulty the anti-aircraft batteries will experience in beating them off, whilst the hydroplane performances suggest the use of the German naval air arm against sea routes far away from German soil, for instance their use against Great Britain's Atlantic seaways.

Another advantage enjoyed by the German air arm is the concentration of aero-production on a small number of types each highly suited for the particular purposes to which it is to be put. In this way the German air arm will be supplied with a complete arsenal of different types for different purposes, whilst the atomisation of production over different types of plane intended for the same purpose is being avoided. All categories of planes are represented by a limited number of types, each representing a high level of technical and tactical quality. Fighter-plane types are now the Messerschmidt BF–109, the Heinkel 112, the Arado 68 and 80, Focke-Wulf 159 and 87, and the latest powerful twin-engine Messerschmidt 110. Medium and light bomber types are the Junkers 86, the Heinkel 111 and 118, the Henschell 126, and the Arado 81. Heavy bomber types are the Junkers 89 and 90, the Focke-Wulf 57, and the Dornier 19. Special power-dive bombers are the Hamburg 137, the Henschell 123 and the Junkers 87. The Henschell 124 serves in particular as an air cruiser, whilst the Focke-Wulf 189, the Hamburg 141 and the Henschell 126 serve for reconnaissance purposes, and also as light bombers. German hydroplanes are also of very high quality: the Arado 95, and the Dornier 18 E, 18 F and 24. The last three types have a radius of action of between 2,000 and 3,000 miles and are veritable naval air cruisers.

Apart from the question of quality, the German aero-industry is making every possible effort to outnumber the two Western powers in the air, and there is no doubt that Goering's air strategy is aiming at a two-power standard as the minimum strength of the German air arm, which is to be as strong as the British and French air forces together. In the autumn of 1938, during and after the Czech crisis, German sources, including Hitler himself, announced repeatedly that since the spring of 1938 the strength of the German Air Force had been doubled. The official reporter on the Air Estimates of the French Chamber of Deputies, Paul Rives, estimated the first-line strength of the German Air Force in

October 1938 at between 4,500 and 5,000 planes. But now, as Rives confirms, the German aim is to create an air arm having between 8,000 and 10,000 machines by 1939–40 at the latest. This aim can be achieved. The Soviet Union succeeded in forming an air arm of this strength in the years between 1930 and 1936, and she certainly had less technical experience and less industrial resources at the beginning than Germany, so that, technically speaking, it is not at all impossible that Germany should achieve the same thing in the years between 1934 and 1939. There are already certain figures available which offer us some possibility of judging: the 750 German aerodromes already in existence have an estimated capacity of between 10,000 and 12,000 machines. This is a further confirmation of the fact that Germany's preparations for war in the air are already at a very advanced stage. Germany undoubtedly has the finest ground staff and organisation in the world. Air fields for all purposes are already available, for taking off, for forced landings, and for alternative landings, according to operative circumstances. No matter in what tactical situation German air squadrons find themselves there will always be landing-fields available. Although Germany is more vulnerable to enemy air attack in general, her air force is incomparably better protected by its ground staff and organisation from enemy air attack than the air forces of the Western powers. The German air fields are widely distributed and they offer no concentrated mark for enemy attack. In the event of such attack the squadrons in the threatened area would take the air immediately and remain up without any definite objective until they received wireless instructions to proceed to some secure landing-field in accordance with information from the reconnoitring- and listening-posts.

The air arm is not only the specifically offensive weapon of German strategy, but it is also regarded as the specific weapon for a war on several fronts. Colonel von Bülow writes:

"The speed of modern aeroplanes makes it possible to utilise to the full the advantages of an inner line, and in a war on two or more fronts the air arm could be used more quickly and more intensively. This special characteristic of the air arm, that it can be moved from one frontier to the other within an hour or so, makes it of decisive importance for the operative conduct of warfare."[1]

During the World War Germany fully utilised the advantages of the inner line of direct communication between the various fronts: whole armies could be transported within from 10 to 15 days from the Western to the Eastern front and vice-versa. To-day there is the added advantage of the inner air line, whose possibilities are still greater. In the next war the German air squadrons which bomb Leningrad or Bucharest one day will bomb London and Paris the next.

3. AN ARMY OF CONCEALED EFFECTIVES

The new German Army is above all a mass army, and its modern military technique rests on a very broad mass basis. After the re-introduction of compulsory general military service the German Army numbered between 900,000 and 1,000,000 men, including between 300,000 and 350,000 professional soldiers who were taken over from the old Reichswehr. These professional soldiers are men of very high military qualities, and they can be regarded as the non-commissioned officers of the German Army when it is at full war strength. The introduction of the two-year period of service had a two-fold aim: to increase the number of effectives and at the same time to improve the standard of training. This increase in army effectives represents an important stage on the way to German military hegemony in Central and Western Europe: the peace-time strength of the German Army to-day is approximately equal to the combined strength of the French, British, Polish, Czechoslovakian and Belgian armies. Above all, the numerical superiority of the German Army over the military effectives of the Western powers is overwhelming. In 1914 the German peace-time army was rather weaker than the combined strength of the French,

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[1] Colonel von Bülow in the "*Militarwissenschaftliche Rundschau*", December 1935, p. 80.

British and Belgian armies, but to-day it is twice as strong as the combined strength of the Western European armies. The relation of strength has altered from 1 : 1 to 2 : 1, with all the operative possibilities which result from the latter proportion.

The number of Divisions laid down for the peace-time German Army in March 1938 must not lead us to wrong conclusions; the numerical relation of the German Army to the French Army cannot be effectively represented by the mere number of Divisions: 54 to 26.[1] Now that the two-year period of service has been introduced, the German Army has sufficient man-power for a considerably larger number of Divisions. The German Army on a peace footing, i.e., before the mobilisation in the summer of 1938, could muster 80 Divisions. The German Divisions of to-day are the potential Army Corps of to-morrow, just as the Army Corps of to-day are the potential armies of to-morrow.

The decisive characteristic of the new German Army is its readiness for swift action. The process of mobilisation in Germany would be rather different from that in the rest of Europe. The other European armies have their trained reserves, i.e., civilians who have served in the army, but in the case of the German Army these men are concealed effectives, they are militarily prepared cadres even in peace-time; they represent, in fact, a second-line army. The civilian who is called up for military service will represent only the third line of reserves, something like the old *Landsturm*. The first line of reserves to be called up in the event of mobilisation will be the police, the members of the Labour Corps, the members of the Special Squads (Black Guards), and the élite of the semi-military organisations: the National Socialist Automobile Corps and the National Socialist Air Corps. This first line of reserves consists of between 600,000 and 700,000 men, and with a few exceptions they are already living in barracks, etc., so that mobilisation in the ordinary sense is unnecessary. Approximately 50 further Divisions could be formed immediately with these men. The second-line reserves to be called up will be the Storm Troops (Brown-shirted S.A.) and the Storm-Troops Reserve (the former Nationalist Stahlhelm), and the main body of the National Socialist Automobile Corps. This second line consists of at least 600,000 men, and between 40 and 50 Divisions could be formed with them. These men are not in barracks in peace-time, but they are strictly organised and under centralised leadership, and in addition they are kept permanently trained. In other words, Germany's standing army and her second-line army (the first and second-line reserves) can set up no less than 180 Divisions, and that without mobilisation in the ordinary sense of the term. Ordinary mobilisation in Germany could take place within narrow limits only, and those civilians who are not members of any of the various semi-military organisations, but who will be called up for military service in the event of mobilisation, will comprise not more than one-third of Germany's total armed forces. Thus, Germany has not only the man-power for an army of 300 Divisions at full war strength, as the "*Deutsche Wehr*" has pointed out, but she has also the skeleton organisation for the greater number of these Divisions, thanks to her semi-military organisations. This means that she can mobilise 2·5 million men in the depths of peace without any other preparations than a simple order to the various semi-military organisations. And this could be done in a very short space of time. There is no doubt that the German Army is at a greater stage of preparedness for rapid action than the armies of the Western Powers.

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[1] At the end of 1938 the German standing army included 39 Infantry Divisions, but before long the existing 18 Army Corps will undoubtedly be brought up to their full strength of 54 Infantry Divisions, 3 Divisions per Army Corps.

4. MOTORISATION AND THE TANK CORPS

The possibility of a lightning mobilisation in Germany is favoured by two factors: we have already dealt with the first one, the organisation of the major portion of the reserves in semi-military organisations; the second factor is a matter of transport. The three main characteristics of the German Army to-day are its numerical strength, the high level of its technical resources, and its great mobility. This mobility is based on motorisation. The factor of mobility will play a role from the moment of mobilisation; it will be used on the battle-field itself, and it will influence the whole conduct of the war. It is mobility, i.e., motorisation, which makes the German Army into what Paul Reynaud has termed "a meteoric army". Motorisation is the technical basis of Germany's new strategy; it is intended not only to take advancing troops forward rapidly on the field of battle, but also to make possible the successful conduct of a war on two or more fronts. Germany is motorising her inner line, i.e., her communications between the frontiers on which the next war will be fought. The whole of Germany is being transformed by a process of motorisation into a base for the armies in the next war, and the former idea of a hinterland practically out of touch with the front line is disappearing.

National Socialist Germany is carrying out complete motorisation. According to the figures of the "*Deutsche Wehr*" the transport park of the German Army consists of 135,000 lorries, 40,000 motor-cars and 60,000 motor-cycles. The number of tractors is not mentioned. Motorisation is being thoroughly developed in every respect: motor roads are being laid down, the production of artificial petrol and artificial rubber, and of motor-cars in general, is being pushed forward rapidly, motor transport is being carefully organised, drivers are being trained on a mass scale, and finally the motorised units themselves are being rapidly extended. All these activities are being carried out according to a co-ordinated plan, and they all aim at securing the greatest possible degree of army motorisation. Between 1932 and 1936 Germany increased her production of motor-cars sixfold. In 1932 she produced 43,000 motor-cars and 8,000 lorries, and in 1936 263,000 motor-cars and 59,000 lorries. She has the largest number of motor-cycles: the most important machine for motorised cavalry, and for the highly-mobile motorised infantry units. The National Socialist Automobile Corps has between 400,000 and 500,000 members organised in 21 brigades, and they represent an almost inexhaustible technical reserve for the motorised troops of the German Army.

In the Soviet Union the railways are to a certain extent replaced by wide-scale army motorisation, but in Germany the densest railway network in Europe is supplemented by wide-scale army motorisation. The combination and co-ordination of these two create a transport potential for use in time of war which is unequalled anywhere in Europe. Railway trucks roll along the German roads independent of both locomotives and rails. They are carried on a specially-constructed platform, the so-called Culmeyer chassis. And tanks roll along the German railway lines, independent of locomotives and driven on specially-constructed chassis by their own motor power. In this way the heaviest military traffic can be organised with facility along the most favourable routes available.

Motorisation gives the German Army entirely new strategical possibilities, possibilities it did not possess even approximately in 1914.

The internal-combustion engine coupled direct to the weapon creates a new technique of war: tank warfare, and German strategy regards it as decisive. The tank which the Allied armies sent to smash its way through the German lines and encompass Germany's military defeat in 1918 is now to give the German Army its revenge and invest it with military hegemony in the West. The leaders of the German Army are planning to use the tank in numbers undreamt of by the armies of Western Europe. The German Army at full war strength will have all types of tank from the light 4-ton machine to the heavy 100-ton monster. German military strategy has set up the highest norms for the use of the tank in attack: up to 150 tanks per kilometre. General Guderian, the leading German authority on tank warfare, even considers that it will be possible to send a whole Tank Brigade into action along a front of two kilometres, i.e., 500 tanks or 250 per kilometre of front. That probably represents the greatest possible concentration of mechanised force conceivable. German military literature proposes the use of the tank to an extent which seems very near reckless waste of a valuable weapon; for instance for the storming of fortifications tanks are to be sacrificed in masses to fill up the pits and trenches. German military literature has only one form of use for the tank: its concentrated use in great masses.

The German army manœuvres in the autumn of 1937 were intended to prove that the concentrated and dexterous use of the tank in masses can obtain a deep break-through and decide the battle even with a minimum of losses to the tank arm. Inspired by these more or less arranged results, the military correspondent of the "*Frankfurter Zeitung*" writes:

> "After that it was easy to realise that experience in the Spanish civil war can hardly be regarded as decisive for the use of the tank in modern warfare. There has never been any attack in Spain carried out by a really large number of tanks."

The military experts of the Western Powers have been deeply impressed and alarmed by the imposing array of German Armoured Divisions, but they are wrong if they imagine that these Armoured Divisions represent the highest mechanised concentration of the German Army in a future war. It is true that modern German strategy thinks more or less in terms of Armoured Divisions, but the decisive offensive operations in the next war will be carried out by whole armies of tanks followed up by motorised armies. German strategy has taken over the idea of the Austrian General Eimannsberger of creating whole tank armies consisting of 5,000 machines to carry out the decisive break-through operations in a future war. German strategy regards the tank as an independent weapon of offence, unlike French strategy, which regards it as chiefly a supplementary weapon of infantry formations. German Tactical Instructions declare:

> "Close connection with the infantry robs the tank of its advantage in speed and increases the risk of destruction by hostile defensive forces."

German strategy refuses to adapt the speed of the tank to that of slow-moving infantry, and therefore it is adapting the speed of infantry to that of tanks, and motorised infantry is being formed to accompany the tanks.

The German Armoured Divisions which are so feared to-day are each composed of a Tank Brigade with 500 tanks, a Motorised Rifle Brigade and a Motorised Regiment of Artillery. They do not represent the last word in Germany's tank possibilities. The German Army at full war strength will certainly have independent Tank Brigades organised into tank armies, and also many varieties of moto-mechanised units. In accordance with German strategical ideas these units will be various in their composition. Light Armoured Divisions are being formed, and there were already four such (motorised) Divisions in existence at the end of 1938. The next step is to be the formation of light mechanised Army Corps consisting of several Divisions, and then the very heavy Armoured Divisions for strategic break-through purposes.

We may assume that the tank strength of the German Army given in the "*Deutsche Wehr*" (10,500 tanks and 20 Motorised Divisions) is a minimum. In the event of a multi-front war the German General Staff will require at least two tank armies, i.e., between 8,000 and 10,000 tanks. There is no necessity to keep this enormous mass of tanks together all the time, but in the event of their concentration strong tank formations will be necessary on other sectors of the front. The calculation can be made differently: in the event of a war on two fronts Germany would have a front of about 400 kilometres against France, and a front of about 900 kilometres against the Soviet Union. That is a total front of 1,300 kilometres. Under normal circumstances 10 tanks per kilometre are necessary for the support of the infantry, but with Germany's tank norms an even higher figure must be reckoned, particularly as Germany will always strive to take the offensive on big sectors of the front. An enormous mass of 15,000 tanks would therefore not be too much for the German Army in the event of a war on more than one front.

At the beginning of 1938 the German Army had, according to official figures, 5 Armoured Divisions with about 2,500 tanks, 4 light (motorised) Divisions with about 1,000 tanks, about 2,000 further tanks distributed amongst other units, chiefly reconnaissance detachments and infantry units, whilst about 1,000 further tanks were in reserve, making a total of between 6,000 and 7,000 tanks. However, the German General Staff is by no means satisfied with this strength. The norms of tank armament in modern warfare are already fairly clearly laid down, so that we must reckon with something like the doubling of Germany's tank strength during 1939–40. According to the theories of the German General Staff the tank is the weapon which must be used vigorously at the very outset of hostilities; it is to form the core of the army of invasion.

Having regard to the great capacity of German industry, the doubling of Germany's tank strength will not meet with any insuperable technical or organisational difficulties. Regarded from the standpoint of quality, construction and fighting value, the German Army tank was by no means a first-class weapon in 1938. In that year there were no really heavy tanks at all, except one or two prototypes, and the medium tanks were not in existence in any great numbers. And during the Spanish civil war the German light tank showed only a very mediocre performance. The German tank arm will be a really powerful factor only after its re-equipment. Up to 1938 the German tank was not up to the level of the tasks German strategy proposed to saddle it with. However, on September 28th, 1937, heavy tanks rolled past in the parade before Hitler and Mussolini—probably the first time that they were publicly shown.

5. INFANTRY SUPERIORITY

Whereas the air arm and the tank arm of the German Army in 1937 were by no means highly developed either in quantity or quality, the new German infantry was already perfected. The modern German infantry formations probably represent the greatest achievement of the German army reformers. German infantry is more suitably and more strongly equipped than any other infantry arm in Europe, and it is organically connected with the motor on the one hand and the specialised modern artillery on the other, so that it possesses great mobility and fire-power.

A new type of infantry has been developed in the German Army, the Motorised Rifle Brigades. At present these units are brigaded with the Armoured Divisions, but in future warfare they will operate independently as separate Divisions. These troops must be distinguished from motorised infantry, and they have a different task. They are highly mobile, mounted on motor-cycles or carried by cross-country motor-vehicles, they develop speeds of between 18 and 20 miles an hour, and daily performances of 150 miles. This new infantry is admirably suited to a war of manœuvre, and above all to the pursuit of a fleeing enemy, the occupation of weakly held territory, the strengthening of threatened flanks and the rapid closing of breaches. These troops combine all the strength of infantrymen with the greatest possible mobility, a mobility greatly in excess of that of cavalry.

The modern German Infantry Division is very heavily armed, and it has 457 machine-guns and a whole arsenal of various kinds of artillery, whereas the old Reichswehr Division had only 270 machine-guns and 72 guns. Up till quite recently a Division had 54 anti-tank guns, but to-day, according to French information, it has already 72 such guns. Instead of 12 anti-aircraft guns it is now reported to have 18. The number of mortars remains at 24. In addition to this there is a strong force of Divisional Artillery. The quality of the artillery accompanying the infantry is high, and the German anti-tank gun is acknowledged as one of the best in Europe. A French artillery expert writes as follows concerning the German mortars:

> "Thanks to various loading possibilities it can be used both for vertical and trajectory fire. It is light and of great tactical mobility, and it seems to be particularly suited for a war of movement." [1]

The German infantry has a powerful combination both of defensive and offensive fire: anti-tank and anti-aircraft guns, mortars and Divisional Artillery. It represents, in fact, a synthesis of all arms, and it has been forged with mobile artillery into one fighting unit. The German Army has adapted the principles of the Italian army reformer General Visconti-Prasca, and it has realised them much more effectively than the Italian Army has: supplied with its own artillery, infantry develops into an independent offensive fighting unit. The German artillery arm is also being reformed. The leaders of the German Army are striving to equip the infantry with the highest possible norms of light, mobile, quick-firing artillery (anti-tank and anti-aircraft guns) in order to destroy or at least cripple the most powerful weapons of offence at the disposal of a probable enemy. Experience in the Spanish civil war has shown the light German anti-aircraft gun to be the best of its kind in Europe. The German Army seems to have completely accepted the standpoint of the Austrian theoretician of tank and artillery warfare, General Eimannsberger, who writes:

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[1] "*La Revue d'Infanterie*", February 1936, p. 220.

> "It may very easily happen in future warfare that the chief fire of Divisional Artillery must be directed not against enemy trenches, but to securing quick results against his tanks and aircraft. It will be decisive for the future of the artillery as a modern arm if it succeeds in adapting itself to new tasks and acquiring mobility." [1]

Germany's new armament technique indicates that she is determined to wage a war of rapid movement and manœuvre.

This does not mean that there is any intention of weakening the "normal" artillery. On the contrary, Divisional Artillery is to be increased to two full regiments, one light, the other heavy. The 77mm. field gun has been replaced by the 105mm. howitzer in the light artillery regiments (consisting of three companies). The heavy artillery regiments have two companies each, one of which is still horsed and the other already motorised. Each company has one battery of 105mm. guns and one of 150mm. howitzers. Medium and heavy artillery is still the finest product of German armament technique as it was during the World War, and the accuracy of German artillery is of a very high order. The German

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[1] In the "*Militarwissenschaftliche Mitteilungun*", Vienna, January 1935.

77mm. field gun has a range of about 7½ miles, the 105mm. field howitzer has a range of about 7 miles, the 105mm. howitzer almost 10 miles, the 155mm. howitzer of the Corps Artillery 12½ miles. The performance of the heavy artillery is magnificent, and the 11-inch howitzer has a range of 25 miles. The heavy ordnance units of the German Army had not been completely made up in 1937.

. . . . .

The German Army is a new type of army. In comparison with the German Army of to-day the German Army of 1914 which won the battles of Charleroi and Tannenberg was a cumbrous machine poorly equipped. Compared with the German Army of to-day the armies of the Western Powers are terribly deficient both in numbers and equipment. Everything in the German Army of to-day makes for mobility, striking force and fire-power. In 1939–40 the military revolution in Germany will be complete, and by the doubling of its war material the German Army will be prepared to take the field at full war strength.

CHAPTER VI

THE WAR DOCTRINE OF NATIONAL SOCIALIST GERMANY

I. TOTALITARIAN WARFARE

GERMAN STRATEGY, WITH its remarkably fine instrument, the German Army, is not an independent factor, and its development is not determined only by considerations of military expediency. German strategy is given its tasks by the war doctrine of National Socialist Germany, whose whole ideas are dominated by the conception of totalitarian warfare. Let us examine this slogan a little more closely. Totalitarian warfare means the mobilisation of all the forces of the nation in the preparations for war and afterwards in its prosecution. Totalitarian warfare means total militarisation. War ceases to be the continuation of politics with other means, as Clausewitz taught that it was, and politics, on the contrary, become a mere means to continue the last war with other means and prepare for the new one. Or in the famous words of Ludendorff:

> "All the theories of Clausewitz have been turned upside down. . . . War is the highest expression of national life. Therefore politics must be subordinate to the prosecution of war." [1]

Or as a German military publication puts it no less clearly:

> "War has become a form of national existence with the same rights as peace. No human or social activity has any right to exist unless it serves the preparations for war. The new individual is completely filled with the idea of war. He may not, he cannot, think of anything else at all." [2]

Thus war becomes an aim in itself, and the State becomes a mere machine for waging war.

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[1] General Ludendorff, "*Der totale Krieg*", Berlin 1935, p. 10.

[2] "*Deutsche Wehr*", Supplement "*Deutsche Volkskraft*", June 13th, 1935.

This is more than mere ideology. War itself is extended. The new German war doctrine, which was already developed in its essentials before National Socialism came to power, declares that military warfare brings no final decision, and two new forms of warfare have developed: economic warfare and the war of morale.[1] Once in power, National Socialism confirmed this doctrine and extended it. Economic warfare means the utmost possible mobilisation of the economic system in the preparations for war and its subsequent prosecution, and it means, in particular, the destruction by military force of the economic system of the enemy. War in future will be waged not only against the military forces of the enemy, but also against his economic centres, and this stresses the great importance of the air arm as a weapon for long-distance operations against the economic centres of the enemy. The war of morale will aim at demoralising the enemy, breaking down his will to resist, and capturing public opinion by propaganda. General von Metzsch, who is, by the way, not a National Socialist, writes as follows:

> "Propaganda is just as much a weapon as artillery or the chemical arm. It must not be regarded merely as a means of delivering a final blow to a shattered army, but as a weapon to be used immediately on the outbreak of hostilities as a natural phenomenon of warfare." [2]

It is interesting to note that one of the most intelligent military writers in National Socialist Germany compares propaganda with a cloud of poison gas. The war of morale will be fought with every possible psycho-technical means, and above all by wireless. The Commander of the Munich Military Academy, Lieutenant-Colonel Siebert, reckons that simultaneously with invasion by a shock army at the beginning of a totalitarian war, powerful wireless stations would come into operation to demoralise the enemy forces. However, this propaganda war will be something more than a mere cunning campaign carried out with the technical resources of modern news dissemination; it is also an ideological war, a crusade of the fascist regime against democracy.

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[1] G. Soldan (Editor of the "*Deutsche Wehr*") in his book "*Der Mensch und die Schlacht der Zukunft*", Berlin 1932.

[2] General von Metzsch, "*Die Entwicklungstendenzen des Krieges*", in the collective work "*Wie würde ein neuer Krieg aussehen?*", Zurich, 1932, p. 30.

Totalitarian war is also time-table war, a war fixed to begin on a certain previously determined date for which the aggressor country will prepare with all possible energy and thoroughness by mobilising his whole economic system and training and raising a mass army. Time-table preparations will be made both with regard to man-power and war material. From the very first day of hostilities the whole weight of every available man supported by the maximum development of war potential is to be hurled against the enemy at once. Totalitarian warfare is warfare waged with every available resource.

Totalitarian warfare also determines the aims of warfare. Totalitarian warfare cannot be pursued with any other aim than that of completely dominating Europe. This tremendous effort and the enormous risk involved are worth while, and can be carried out and taken, only if the promised success is equally gigantic, if booty of world historic importance is at stake. Such tremendous exertion and such a risk are not worth while for a limited objective. Totalitarian warfare is warfare in which everything is at stake. It is a war for everything, if necessary, against everybody. Such warfare automatically renders limited objectives impossible. But warfare with unlimited objectives must reckon with the possibility of an unlimited number of enemies. The aim of totalitarian warfare—European domination—and the method of its preparation—time-table warfare—are closely connected with each other. When German foreign policy and German strategy were not intent on European domination, and contemplated only a war with limited objectives, German military policy was not in favour of time-table warfare, and General von Seeckt declared himself opposed to it:

> "The piling up of huge supplies is the most wasteful thing imaginable, and at the same time it is of very doubtful military value owing to the danger of obsolescence. There is only one method for mass equipment: a decision with regard to the types of

weapon required and then all preparations for its mass production in case of need." [1]

However, this method of manufacturing prototypes is of no use for time-table warfare. There is no danger of obsolescence when the whole available mass of material is to be hurled against the enemy on a previously fixed date. The enemy must be overwhelmed at the very outset with a vast accumulation of war materials, because in the event of a protracted war it is doubtful whether uninterrupted supplies could be arranged for; there is the danger of effective air attack, etc. Where time-table warfare is concerned no accumulation of supplies can be too large.

Totalitarian warfare is a war of total destruction. It will be waged not only against the military forces of the enemy, but against the enemy population as a whole. And the end of the war will not be some settlement or some limited loss for the vanquished, but the political destruction of the defeated nation. There is no other means by which National Socialist Germany can seize and maintain European hegemony. One of the leading military journalists of National Socialist Germany, Linnebach, the editor of "*Wissen und Wehr*", declares:

> "A war of destruction is a war whose political aim is the destruction of the enemy State." [2]

And another German military publication puts it even more brutally:

> "The war of the future will be totalitarian not only in the mobilisation of forces for its prosecution, but also in the extent of its results; in other words, totalitarian war will end in totalitarian victory. Totalitarian victory means the utter destruction of the vanquished nation, and its complete and final disappearance from the historical arena. The victor will not negotiate with the vanquished concerning the conditions for peace, because there will be no party capable of negotiations. He will impose whatever conditions he thinks fit. In reality totalitarian warfare is nothing but a gigantic struggle of elimination whose upshot will be terrible and irrevocable in its finality." [3]

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[1] General von Seeckt, "*Gedanken eines Soldaten?*", Berlin 1929.

[2] In "*Wissen und Wehr*", November 1934, p. 729.

[3] "*Deutsche Wehr*", Supplement "*Die Deutsche Volkskraft*", June 13th, 1935.

Thus it is not a question of a German Versailles which National Socialist Germany proposes to force on Europe, but something entirely different, and the same publication declares:

> "As a matter of fact the World War ended without any decisive result. None of the belligerent parties disappeared from the arena for good, or was even forced into the background permanently."

The new decision at which National Socialist Germany is aiming is to bring about the final destruction of the other big European powers as the essential preliminary condition for a German Europe. Firm determinations to establish German hegemony in Europe, to develop Germany's military technical resources on a vast scale, and to exterminate ruthlessly all her enemies unite in Germany's new war doctrine, and form the basis of her new strategy.

2. THE STRATEGY OF LIGHTNING DECISION

The strategy of the German Army is clearly and exclusively based on offensive action; the strategical offensive is identified with a sudden incursion; the attack is intended as a brutal invasion. The chief task of German strategy in its war preparations is to organise an attack which will bring about a lightning decision. Victory must be won in the first phase of the war, and the German Army is being prepared to take the utmost advantage of its initiative, the suddenness with which its blow will fall, and the complete surprise of the enemy. German strategy does not even reckon with the possibility that Germany will be attacked, and no provisions have been made for the possibility of defence or even of counter-attack.

Germany's new war doctrine considers it quite possible to win the war in the first powerful rush. It has its eyes fixed on the dream of a lightning victory won by an enormous concentration of forces at a tremendous speed made possible by the motor on land and in the air.

As early as 1932 General von Metzsch wrote:

> "Perhaps such a surprise attack might even succeed in obtaining a decision."

And Lieutenant-Colonel Justrow, an authoritative German expert, writes:

> "Where the forces of the belligerents are widely different in strength, then the one who has a tremendous superiority from the very beginning in all the means of modern warfare, troops, arms and equipment, can risk a daring large-scale operation and win the war with one blow." [1]

And in another passage he adds:

> "Decisive success against a defence which is prepared for all eventualities is possible, if at all, only by a lightning surprise attack."

We know already that Germany's whole armament plan is aimed at establishing such superiority as that to which Justrow refers over the Western Powers. In his book "What Will the Next War be Like?" the Italian military expert Colonel Moretta-Rócca correctly formulates Germany's new war doctrine as follows:

1. A sudden powerful invasion carried out like lightning by an army with first-class equipment, penetrating deep into the mobilisation area of the enemy and spreading panic throughout the enemy country;
2. A ceaseless offensive carried out with great precision and swiftness.

This conception of a lightning decision by invasion is undoubtedly based on existing possibilities. In all future wars decisive battles will begin at the very outset. The big continental powers, and Germany and the Soviet Union in particular, have concentrated shock armies which are so tactically located and so powerfully armed that within the first 24 hours of hostilities they will be in a position to penetrate far into the territory of the enemy. A decisive air attack could take place within a few hours of the opening of hostilities. Thanks to modern means of transport, army motorisation, etc., the mobilisation and concentration of troops can be carried out much more quickly to-day than they could in 1914. It is already absolutely certain that in the next war the belligerent powers will not have several weeks in which to carry out their mobilisation without fear of interference, whilst preliminary skirmishes are taking place near the frontiers as the belligerent armies begin to feel each other's strength. Big battles desperately fought will take place immediately and the invading army will do its utmost to batter its way through to the enemy base of operations, or at the very least to overrun his first line of defence. To this extent Germany's new strategy is quite realistic. And there are other reasons which render its plans feasible. From the very beginning the German Army in the West will be so powerful in numbers and in military technical resources and so mobile that it is quite possible that it will enjoy a definite superiority at first, and that superiority might very well put it in position to make a determined attempt at forcing an immediate decision.

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[1] Lieutenant-Colonel Justrow, "*Die technischen Probleme der neuzeitigen Kriegführung*", in "*Wissen und Wehr*", June 1934, p. 383.

A man who knows what he is talking about has given us a description of the planned German invasion which reads like a prophetic army report of the operations. He is General Guderian, Commander-in-Chief of the German Armoured Divisions destined to lead this surprise attack. His description is published in the official organ of the German War Ministry:

"One night the doors of aeroplane hangars and army garages will be flung back, motors will be tuned up, and squadrons will swing into movement. The first sudden blow may capture important industrial and raw-material districts or destroy them by air attack so that they can take no part in war production. Enemy governmental and military centres may be crippled and his transport system disorganised. In any case, the first strategic surprise attack will penetrate more or less deep into enemy territory according to the distances to be covered and the amount of resistance met with.

"The first wave of air and mechanised attack will be followed up by Motorised Infantry Divisions. They will be carried to the verge of the occupied territory and hold it, thereby freeing the mobile

> units for another blow. In the meantime the attacker will be raising a mass army. He has the choice of territory and time for his next big blow, and he will then bring up the weapons intended for breaking down all resistance and bursting through the enemy lines. He will do his best to launch the great blow suddenly so as to take the enemy by surprise, rapidly concentrating his mobile troops and hurling his air force at the enemy. The Armoured Divisions will no longer stop when the first objectives have been reached; on the contrary, utilising their speed and their radius of action to the full they will do their utmost to complete the break-through into the enemy lines of communication. Blow after blow will be launched ceaselessly in order to roll up the enemy front and carry the attack as far as possible into enemy territory. The air force will attack the enemy reserves and prevent their intervention." [1]

That is the picture of a future German invasion: a sudden attack—in the night—and the fully-prepared shock army will open up the way into the heart of the enemy country for the rapidly mobilised mass army; the greatest possible concentration of modern technical resources will be organised; the air force will be sent into action immediately at full strength; a giant battering-ram of Armoured Divisions will drive forward first to open the way and then to break through; the highest possible speed will characterise all operations, and the pace will be set by exploiting the rapidity of the tank to the utmost, and it would appear that almost all the infantry used will be motorised. As Justrow points out:

> "In any case, the biggest chance of obtaining a decision at one blow by means of technical superiority will lie at the beginning of hostilities." [2]

And the whole operation will be a unique combination of numbers, technique and mobility.

The method was tried out in the big German manœuvres in North-East Germany in the autumn of 1937: its main theme was to demonstrate the combined use of the air arm and massed tank units supported by motorised troops.

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[1] General Guderian in the "*Militarwissenschaftliche Rundschau*", December 1935, pp. 75–6.

[2] Lieutenant-Colonel Justrow, "*Wissen und Wehr*", p. 381.

3. A STRATEGY OF DEFECTIVE ENDURANCE

The war doctrine of National Socialist Germany is thoroughly realistic when it attaches such great importance to the operations conducted in the very first phase of the war, and to the organisation of technical superiority for this phase of the struggle. This conception is completely in accord with the latest developments of military technique and military science. And nevertheless, the weakness of German war doctrine is obvious: it concentrates essentially on the first frontier battle, and it identifies the strategic offensive and, in fact, the prosecution of the war as a whole with the first act of invasion. In a rather arbitrary fashion it presupposes the culmination of future warfare to be at the very beginning of the war, and it appears to ignore altogether the "gradation of effort" for which Red strategy is preparing. German strategy is concentrated on a one-act war; it is a strategy of defective endurance.

It is worth while comparing Germany strategy with Red strategy. They have certain common features and both of them are very definitely offensive strategies. Both reckon with the use of modern military technical resources on an enormous scale, and both preach manœuvre and mobility. But there the resemblance ends, and whilst German strategy stakes everything on a sudden surprise attack and a sudden overwhelming blow to obtain a decision, Red strategy reckons with the possibility of a long resistance on the part of the enemy, and it therefore prepares to increase its own war efforts steadily as need arises. Unlike German strategy, Red strategy does not think in terms of a one-act invasion, but in terms of a whole series of battles and campaigns. It is prepared to envisage a protracted war, and this is the standpoint from which Soviet military experts criticise Germany's war doctrine, and raise warning voices against the danger of overestimating the importance of surprise and mobility. E. Sergeiev writes:

> "No, suddenness alone will certainly not suffice to determine the result of the preliminary operations. In the last resort, the advan-

tage will be with the army which is numerically stronger, better equipped technically, and better prepared, and above all the army which knows what it is fighting for." [1]

And F. Novoslobodski writes:

> "Rapid preliminary operations may secure the attacker a strategic advantage, but that alone will not decide the upshot of the war itself, and therefore the hopes of those military experts who believe that a future war can be won by a lightning blow, that modern military technique makes this possible and that brilliant military leadership will be able to realise it in practice are vain." [2]

This criticism strikes a fatal blow at the war doctrine of National Socialist Germany.

Leading German authorities on military strategy are themselves in doubt as to whether it is really possible to win the coming war with one blow and prevent it dragging on into a protracted struggle with all its fateful consequences for Germany. Such doubts have been expressed even by Ludendorff himself, the most impetuous apostle of assault produced by the World War:

> "In view of the mass mobilisation of armies, the extent of the reserves available for a defeated army, and the highly-developed railway network which permits the rapid concentration and movements of military forces, it is unlikely that it will be possible to obtain a decision in the first battles of the war." [3]

And General Wetzell, Chief of Military Operations on the Supreme War Council under Ludendorff during the World War, Chief of the camouflaged General Staff of the Reichswehr during the Weimar Republic, and now Editor-in-Chief of the "*Militar-Wochenblatt*", speaks his mind even more plainly:

> "In view of the fact that all States, both big and little, are guarding their frontiers even in peace-time by military fortifications of all kinds, it appears very doubtful whether a war of movement on the 1914 scale will ever be possible again." [4]

General Wetzell is not merely casting doubt on the possibility of a lightning victory; he estimates the defensive possibilities of the attacked States very highly, and even doubts whether the attacker, i.e., Germany, will be able to conduct a war of movement on the same scale as in 1914, whereas the official strategy of National Socialist Germany stakes everything on the success of the first German rush and the subsequent possibility of a war of movement on an even greater scale than in 1914. It is characteristic, in fact, that still, small doubts are beginning to make themselves felt even in the hard heads of the still-surviving German strategists of the World War. As a result the war doctrine of National Socialist Germany begins to show contradictions. The "*Militär-Wochenblatt*" publishes an article entitled "Deployment 1914 and To-day" in which it analyses the new factors of modern warfare,[1] and points out that although modern weapons of offence have become far more effective, on the other hand modern methods of defence are also much more effective and that, in fact, the chances of holding up an attack with comparatively small defensive forces are quite favourable. It also points out that modern armies conducting an offensive will be much more dependent on a steady and uninterrupted supply of munitions, material, and, above all, oil fuel than were the armies of 1914, and that they will therefore be much more sensitive to every dislocation of supplies. This very cautious attitude has not been without its effect: German tactics do not propose to let tanks operate alone; they are not to go into action without effective support from motorised infantry. The idea of daring tank raids is regarded askance for fear that mechanised units might be isolated and cut off from their base. On October 28th the "*Militär-Wochenblatt*" uttered a still more urgent warning:

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[1] E. Sergeiev in "*Kraznaya Svesda*", May 16th, 1936.

[2] F Novoslobodski in "*Kraznaya Svesda*", June 24th, 1936.

[3] Erich Ludendorff, "*Der totale Krieg*", Berlin 1935, p. 110.

[4] General Wetzell in the "*Militar-Wochenblatt*", June 4th, 1936.

> "A strategic raid is a very delicate matter, because although it offers a tempting chance it also represents a great and terrible risk. We must remember in particular that the loss of prestige which would result at the very beginning of a war for any country which carried out such a raid unsuccessfully would be incalculable."

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[1] The "*Militar-Wochenblatt*", October 11th, 1934.

Thus we observe that the original joyful hope of a victorious lightning invasion is already beginning to pale a little. The strategy of lightning decision contradicts to some extent the given technical conditions of modern warfare, and, above all, it leaves one decisive question unanswered: What is the German Army to do, and how will Germany prosecute the war, in the event of the first big German rush being parried? The German Army has no strategical variant for the event of a protracted war.

4. GERMAN STRAGETY INEFFECTIVE AGAINST THE SOVIET UNION

The German strategy of lightning decision is obviously intended for use in the West, and, after the Austro-German *Anschluss* and Munich, still more so against South-East Europe. The decisive operative terrain in which this strategy can be employed embraces France, Belgium, Holland and Switzerland. All the factors which make up Germany's military strength are intended for swift use in this terrain: modern weapons of offence, and, above all, powerful air and tank arms; the German traffic system, and in particular the great motor-roads, which are all directed Westwards, the dense network of railways in West Germany; and finally German strategy itself, because a war of lightning decision is hypothetically possible only in the narrow territorial limits of the West and in the ill-protected terrain of South-East Europe. The trump cards of German strategy, suddenness, surprise and lightning invasions, can be played in the West only.

In the East the strategy of lightning decision must necessarily fail. The terrain of operations against the Soviet Union, and possibly against the Soviet Union and Poland, raises very different problems for the German strategists to solve: protracted military effort, the subjugation of enormous territories, the conquest of an advanced base of operations and finally a struggle against an opponent superior in numbers and armaments. No sudden invasion can secure a decision here. The effect of a sudden, lightning attack would lose itself in the enormous territories involved without having reached even the approaches to the objects aimed at. The new strategy of National Socialist Germany does not merely fail to solve the complicated problems of war in the East, but it has not even carefully considered them.

And for this reason German strategy cannot solve the other important problem of how Germany is to wage a war on several fronts. If German strategy shows itself incapable of developing methods of warfare suited to the new situation created in Eastern Europe by the rise of the Soviet Union, how is it ever to solve the even greater problem of waging war simultaneously in the East and in the West: against the Soviet Union and against the Western powers?

The contradiction is obvious. The war doctrine of National Socialist Germany demands totalitarian war for the establishment of German hegemony in Europe, a war which will have to be waged against an unknown number of enemies (at least against France and the Soviet Union) on several fronts. The leaders of the German Army propose to solve this task with a strategy of lightning decision, but with all its exaggerated impetuosity it is operable only in Western and South-East Europe. It is obvious that German strategy is not in a position to develop methods of warfare against enemies both in the West and in the East. Ludendorff and von Seeckt, both prominent Generals in the World War, both failed to give any satisfactory answer to the question. Both of them appealed vaguely to the genius of some future grand marshal gifted with strategical brilliance and a will of iron, and Ludendorff writes:

> "The will of the military leader must be decisive on all fields of life. His position must be all-embracing, like that of Frederick the Great. A military leader must rely on himself alone. He stands alone. He gives policy the bent it must have in the services of war." [1]

And General von Seeckt praises the determination and tenacity of the coming grand marshal in similarly vague and general terms. Their utterances cover their flight from the insoluble problems placed before National Socialist Germany by the inevitability of a war on several fronts to the lap of the German War God, who is to take flesh in the form of some mystical military genius and solve all insoluble problems by a miracle.

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[1] Eric Ludendorff: "*Der totale Krieg*", Berlin 1935, pp. 107, 111, 112, 117.

But the problem of waging a war on several fronts simultaneously remains obstinately in existence, and National Socialist Germany will one day have to face all its inexorable consequences.

CHAPTER VII

GERMANY AND A WAR ON SEVERAL FRONTS

I. NEW FOREIGN POLICY AND NEW STRATEGY

THE LEADERS OF National Socialist Germany have given German strategy the task of preparing for a war on several fronts. German Fascism demands colonisation areas in a subjugated Eastern Europe, the creation of a German Fascist Empire in Central and South-East Europe, and a successful war of revenge for the establishment of German hegemony in Western Europe. Each of these aims involves a tremendous drive in a particular direction, and each direction represents a future battle front. The military leaders of Germany have never before faced such enormous tasks, not even in 1914.

Under the Weimar Republic the leaders of the Reichswehr, and with them certain influential Conservative circles, did their best to learn the lessons of Germany's defeat in the World War, and to guide her future war preparations into national channels in the spheres of both foreign policy and military strategy. Their main object was to avoid another war on two fronts under all circumstances, and their foreign policy was therefore to extricate Germany from continental encirclement. The fatal struggle for European hegemony was abandoned, and Germany's leaders sought to pursue a realistic policy with limited aims and with limited means, for instance, perhaps in the first place a settlement of accounts with Poland. For the first time for generations German Nationalism was prepared to adopt a moderate policy of limited risks. In foreign politics it proposed to pursue an active continental policy and to conclude an alliance with one or the other of its two main continental enemies, with

France or Russia. The aim of this policy was to relieve future German strategy of an impossible task; the terrible prospect of a two-front war was to be banished for ever. As a result, two main tendencies developed in German foreign politics, and struggled with each other for mastery: the Eastern and the Western policy. Materially there was a great difference between the two policies, but the aims were the same: to win one or the other of the two big continental powers as an ally. Germany was to be made a desirable ally. General von Seeckt and with him the most influential circles in the Reichswehr, certain Conservative circles and certain groups of industrialists were in favour of an alliance with the Soviet Union, whilst von Papen and with him the most influential members of the *Herren-Klub*, the "*Ring*"[1] circle, and certain other industrialist groups were in favour of an alliance with France. No agreement could be obtained concerning the decisive question: with Moscow or with Paris? With whom should Germany go, and against whom and for what? Both these variations were adventurous because they presupposed new military alliances, and, objectively, the possibility—though only after a considerable lapse of time—of new war. But in both cases there was some rational justification for war preparations, and whichever solution was finally adopted it would offer Germany new military possibilities, possibilities such as she had not possessed in the World War. Both these plans show a certain realistic daring: one section of the ruling class demanded an alliance with the hereditary enemy France and the other an alliance with Red Russia. Both possibilities represented a risk for a nationalist German foreign policy.

The coming of the National Socialist dictatorship destroyed both possibilities of an active foreign policy along new lines, and returned to the anti-continental foreign policy of

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[1] The *Herren-Klub*, a fashionable German social club was the centre of a group of political intriguers who, thanks to their connections in aristocratic circles, in the higher civil service and in the upper reaches of the officers' corps, obtained very considerable political influence in Germany. It was this group which caused the fall of the Bruening Cabinet in May 1932. The majority of the members of von Papen's Cabinet were also members of this group. The "*Ring*" was a weekly publication which acted as their mouthpiece. Tr.

German hegemony, with its inevitable strategical corollary of a war on several fronts. The ideologists and politicians of National Socialist Germany abandoned the cautious and rational strategy of the old Reichswehr leaders, and not for the first time in German history the political authorities insisted on a more radical and adventurous military policy than the military authorities were willing to countenance. A precedent was established during the World War, and Falkenhayn describes it as follows in his memoirs:

> "The Supreme War Council steadfastly refused to countenance the race for military achievements of doubtful value or to support vague war aims." [1]

"Steadfastly," that applies only to Falkenhayn's regime. In a German history of the World War one can read the following reproachful lines directed by a soldier to the political authorities:

> "Political leadership in war-time should maintain a wise reserve from the very beginning." [2]

The war historian who addresses these cautious but reproachful lines to the political gamblers of the World War is none other than Colonel Hierl, to-day one of the leading National Socialist military theoreticians and Secretary of State for the Labour Service Scheme, in whose camps he is charged with giving Germany's future soldiers their preliminary infantry training. To-day he certainly thinks less cautiously and critically about Germany's war aims than he did then, but he wrote his book in 1922, at a time when Germany's military leaders had not yet recovered from the depression caused by their defeat in the World War.

In the meantime Hitler has compelled the military authorities to accept his war aims, and with them his strategy and the terrible problems of waging war on several fronts: against France and Western Europe, against the Soviet Union and South-East Europe. The grandiloquent ideas generated in the mind of an inmate of Vienna's casual wards, have triumphed over the great military traditions of Prussia and the German Reich, over the policy which led straight from the older Moltke to General von Seeckt. The military apparatus of National Socialist Germany has degenerated into a mere tool of the regime; it has abandoned its former foreign policy and military strategy, which aimed at a rational preparation for war, in favour of totalitarian militarisation. The former supporters of an alliance with the Soviet Union, led by the late General von Seeckt, are now taking an active part in preparations for war on the Red Republic, just as the former supporters of an alliance with the hereditary enemy France, led by von Papen, are now taking an active part in the preparations for launching a blow against her in the West. Their surrender to National Socialism is revenging itself: following on their capitulation an acute crisis of German strategy is developing.

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[1] General von Falkenhayn, "*Die Oberste Heeresleitung*", Berlin 1920, p. 129.

[2] Colonel Hierl, "*Weltkrieg in Umrissen*", Charlottenburg 1922, Vol. I, p. 15.

2. THE CONSEQUENCES OF THE SCHLIEFFEN PLAN

A minor historical excursion is necessary at this point. The problem of waging a war on two fronts is not a new one for Germany. It has already been very closely considered and plans for its solution have been drawn up. Germany's military position between West and East is objectively settled, and at the same time the possibilities and limitations of German strategy. The discussions which took place on the point before the World War, the lessons of the war itself, and the conclusions drawn from events by Germany's foremost military and strategic experts are all known to us. Between 1918 and 1928, in the years which followed Germany's military defeat, her military experts thoroughly examined the limitations of her military strength, and all the factors which led to her defeat, and, above all, they exhaustively examined the conditions and consequences of any war on several fronts for Germany. The conclusions which resulted from this examination are of burning interest to-day: Germany's own military historians have already written the indictment of the whole preparations for war and of the whole military strategy of National Socialist Germany. The lessons of the World War offer us an invaluable basis for examining the question of what a war on several fronts would mean for Germany to-day.

Let us begin with the Schlieffen Plan, the most brilliant and consummate achievement of German strategy. Drawn up between 1892 and 1905 by the Chief of the German General Staff, Count von Schlieffen, this plan has exercised an almost hypnotic effect on a whole generation of German military theoreticians since, and its principles are identical with the German war doctrine throughout the whole epoch which led up to the World War.

General Max Hoffmann, Ludendorff's right-hand man and his successor as Chief of the General Staff on the Eastern Front, writes:

> "The only possibility of victory for the German Army lay in this plan, in its exact and speediest fulfilment." [1]

And General von Fritsch, until recently Commander-in-Chief of the German Army, declares in his foreword to Schlieffen's book "Cannae", that Schlieffen still remains the classical master of German military strategy and points the way to victory.

What were the main features of this brilliant plan? Professor W. Elze,[2] Professor of Military History at the University of Berlin, speaks of "Schlieffen's principles of the necessary shortness of the war, of the total victory in the West, and its achievement by attack, envelopment and the destruction of the enemy". These three features are undoubtedly the main principles of the Schlieffen Plan:

1. The absolute necessity of a short war;
2. The concentration of main military effort in the West, where the decision must be obtained; and
3. A definite operative technique for the achievement of this decision (envelopment, the main concentration of forces on the right wing, etc.).

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[1] "Memoirs of General Max Hoffmann", Berlin 1928, p. 234.

[2] W. Elze, "*Graf Schlieffen*", Breslau 1928, p. 17.

The greatness of the Schlieffen Plan is not merely that it put a German offensive in the West in the foreground of operations, but that it recognised with uncompromising realism the narrow limitations of Germany's military possibilities in the event of a war on two fronts. The Schlieffen Plan was, in fact, at the same time a warning, and it contained the essence of Germany's terrible dilemma: quick decision or collapse. Schlieffen did not believe that Germany was in a position to stand a long war. Schlieffen's pupil, General Kuhl, one of the commanding generals at the Battle of the Marne, and later Chief of the General Staff of the Army Group of the Crown Prince of Bavaria, writes:

> "A strategy of attrition would necessarily have led to a long war and to our own exhaustion owing to the unlimited resources of our enemies and to our own isolation. Time was against us." [1]

The significance of the Schlieffen Plan lay in the choice of the most suitable objective and the concentration of forces upon it. Schlieffen regarded a simultaneous offensive against both France and Russia as impossible; and he saw the only possibility of a German victory in a strict economy of means and the concentration of exertions on one objective. It was thus as much a statement of plain facts as a strategic theory.

General Staabs, the leading authority of the old German Army on all questions of mobilisation and transport technique, writes:

> "Since then (1890) the German Army Command has never been in a position to envisage large-scale offensive military operations in two directions simultaneously. The relation of forces always demanded that on one front at least the army should remain on the defensive." [2]

Schlieffen drew the logical conclusions from this situation. He was opposed to any dissipation of forces and to any not absolutely necessary extension of the sector of attack. He envisaged only one offensive, against France; and even there only along one sector of the front: by the German right wing in the North through Belgium. Thus he saw only one possi-

[1] General von Kuhl, "*Der Marne-Feldzug*", Berlin 1921, p. 20

[2] General Staabs, "*Der Aufmarsch mach zwei Fronten*", Berlin 1925, p. 12.

bility of a German victory, and that possibility would have to be utilised to the full with the utmost degree of precision. Every other possibility was fraught with the gravest dangers; for instance a simultaneous offensive against both France and Russia, a slow and protracted offensive against France, or an offensive against Russia.[1] The great German strategist was only too well aware of the terrible dangers threatening Germany in a two-front war, and the experience of the World War confirmed his fears to the full.

3. FEAR OF RUSSIA

Schlieffen carefully set down the limitations of German strategy. He regarded a rapid decision against Russia as impossible, and he analysed her tremendous defensive potentialities so accurately that ever since a lively fear of Russia has remained one of the permanent traditions of German strategy. A memorandum written by Schlieffen in December 1892 reads as follows:

> "In long years of preparation Russia has so efficiently organised her mobilisation, so well suited the peace-time location of her army to the needs of war, so developed her railway system that despite the enormous extent of her territory and the low density of her population she is hardly if at all at a disadvantage in the matter of war preparedness as compared with her most-favoured Western neighbours. As she has in addition been cautious enough to arrange for her mobilisation behind a fortified river line she has less cause to fear a surprise attack than any other power." [2]

And in a further memorandum written in November 1893 he declares, "The Russians can no longer be taken by surprise".[3] Schlieffen's prophetic eye recognised the fateful role the Eastern front might play for Germany in the event of a two-front war.

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[1] There is a draft plan of operations for an offensive against Russia drawn up by Schlieffen, but it may be considered as having theoretical and academic interest only. In 1912, after he had retired from the active list, Schlieffen also drafted a plan of operations against France from the Alsace-Lorraine front, and a half-hearted attempt was actually made in 1914 to put this plan into operation.

[2] Quoted from Groner's book, "*Das Testament des Grafen Schlieffen*", Berlin 1928, pp. 101–2.

[3] Quoted from Groner's book, "*Das Testament des Grafen Schlieffen*", Berlin 1928, p. 102.

Schlieffen's tradition remained firmly rooted in the German Army, and it was maintained by his successor, the younger Moltke, who adopted Schlieffen's argumentation. In a memorandum written in November 1911 Moltke enumerates new facts:

> "Since the unfortunate upshot of the war with Japan, Russia has thoroughly reorganised her army. . . . She has altered the location of her troops with a view to facilitating their mobilisation in the event of war. At the cost of great financial sacrifices she has so developed her railway system that the deployment of her forces on the Western and South-Western frontiers could take place in half the time which would have been necessary five years ago." [1]

During the World War, one year after the Battle of the Marne, a sharp discussion took place within the German High Command as to whether a large-scale offensive with a view to obtaining a decision should be launched in the West or in the East. Moltke's successor, the Chief of the German General Staff, Falkenhayn, remained loyal to the Schlieffen tradition. Opposing the German commanders on the Eastern front, Hindenburg and Ludendorff, he denied the possibility, even after the big German successes in 1915, of obtaining a decisive victory on the Eastern front, and in a letter addressed to Hindenburg in 1915 he warned him against undertaking any large-scale operations there:

> "We cannot hope to envelop effectively a numerically stronger opponent, and in addition one who has the vast spaces of Russia behind him. The element of surprise essential to the success of such an operation can never be present sufficiently to prevent the enemy taking counter-measures in time." [2]

Falkenhayn's chief point was that the brilliant construction of Schlieffen's plan was absolutely inoperable on the Eastern front, that it could not be adapted to the vast Russian plains. The Schlieffen Plan was territorially limited, it was planned for the Western theatre of war. It could not be carried out in the East because the close envelopment operations necessary for its success were impossible in such huge spaces, and any attempt at such operations would either lead rapidly to failure, or to the degeneration of military operations into a war of attrition, a war which Germany was not capable of waging successfully.

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[1] Quoted from "*Der Weltkrieg 1914–18*", *Reichsarchiv*, Berlin 1925.

[2] General von Falkenhayn, "*Die Oberste Heeresleitung*", Berlin 1920, p. 124.

Hindenburg and Ludendorff disagreed with von Falkenhayn and insisted that a decision should be sought in the East. Hindenburg was convinced that "the way to the *ultima ratio*, to the enforcement of peace, lies over the body of a defeated Russia".[1] And from 1914 until 1918 Ludendorff always wanted to win the final victory over the Allied powers by a decision on the Eastern front. One of his admirers writes as follows concerning his plans against Russia:

> "Even at the beginning of June 1915 Ludendorff had the idea clearly in his mind of a big Cannae operation for the destruction of the enemy by a double envelopment from North and South." [2]

His idea was never realised. Less known is the fact that in the first half of 1916 Ludendorff was planning a deep incursion into the Ukraine, an undertaking which was forbidden by von Falkenhayn. If the strategists of National Socialist Germany are now planning to invade the Soviet Union, it means that they have determined to ignore the lessons of the World War. Authoritative German military experts have always flatly denied the possibility of a victory in the East. Writing in 1924 on the basis of World War experience, General Kabisch, one of the foremost German military historians, declared:

> "The idea of a rapid and victorious drive against the entrenched Russian Army lacks any objective technical basis. For any thoughtful and calculating soldier the idea of a swift campaign to smash the Russian Army to such an extent that it would be helpless for a long time is an illusion." [3]

And quite recently Ludendorff's 1916 Ukrainian plans were condemned by his own Chief of Military Operations,

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[1] Paul von Hindenburg, "*Aus meinem Leben*", Verlag Hirzel, Leipzig 1920, p. 120.

[2] W. Forster, "*Graf Schlieffen und der Weltkrieg*", Berlin 1925, p. 160.

[3] General Kabisch, "*Streitfragen im Weltkrieg*", Stuttgart 1924, pp. 53–4.

General Wetzell, who writes:[1] "One can only agree with General Falkenhayn when he refused to take this risk." Foreign military experts are of the same opinion. General Loizeau, probably the leading French military theoretician of our day, agrees on the whole with Falkenhayn's attitude, namely that a decisive, i.e., strategic success for Germany could be obtained only on the Western front.[2] General Sayontchkovski, an authoritative Russian historian of the World War, passes the following damning verdict on the Eastern plans of Hindenburg and Ludendorff:

> "The 1915 campaign drew Germany fatally towards the East and compelled her to abandon the traditions of Schlieffen more and more, causing her to weaken her forces in the West by sending one Army Corps after the other to a second-class theatre of war. The campaign of 1915 heavily burdened the Russian theatre of war; it drew heavy German forces away from other fronts and gave the British and the French a breathing space which lasted a year. It was Hindenburg and Ludendorff themselves who deprived Germany of her last hope of victory in the World War." [3]

It is interesting to note that those German military experts who accepted the ideas of von Schlieffen proved themselves capable of drawing political consequences from it. General Gröner reviews Germany's pre-war foreign policy and declares:

> "There was no unity of operative and political ideas. . . . Our statesmen should have pursued a policy in accordance with our operative theories in order that the war could have been waged against the West whilst our rear was protected as far as possible in the East." [4]

In other words, the hope of a successful German offensive existed in the West only; in the East any offensive would have been pointless and hopeless. Gröner therefore demands the protection of the German rear in the East: the avoidance of a two-front war and peace with Russia as the preliminary condition for a successful offensive in the West. If Germany was to be victorious in her struggle against France and her Western allies, then she must not involve herself in war with Russia at all. Even after the beginning of the war, during the crisis of German military strategy, Falkenhayn tried to achieve the same radical solution with political means: in order to have a chance of success on the Western front he demanded a separate peace with Russia. He writes as follows on the point in his book:

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[1] General von Wetzell in the "*Militar-Wochenblatt*", June 18th, 1936, p. 321.

[2] General Loizeau, "*Succès stratégique, succès tactique*", Paris 1934, p. 100.

[3] A. Sayontchkovski, "The World War" (Russian), Moscow 1929, p. 234.

[4] General W. Groner, "*Der Weltkrieg und seine Probleme*", Berlin 1920, pp. 12–13.

> "The Chief of the General Staff therefore proposed that the political authorities should get into touch with Russia with a view to coming to an understanding, stressing the fact that from a military standpoint the gain to be obtained from peace in the East would be so great that a renunciation of any territorial designs there would be of no importance in comparison." [1]

Both as an army leader and as a politician von Falkenhayn showed great courage in making this proposal: in 1915, after the German forces operating on the Eastern front had obtained big successes, he proposed to liquidate the whole operations there and beat a political retreat on the basis of a *status quo* peace, in order to obtain a free hand in the West. His proprosal represented the exact opposite of Hindenburg and Ludendorff's strategy and of Bethmann-Hollweg's diplomacy. Falkenhayn then describes in his book how Bethmann-Hollweg sabotaged his proposal until no possibility of realising it remained. The incident illustrates the breakdown of German strategy under the intolerable burden placed on it by the political authorities. It appears likely that the same situation will recur in National Socialist Germany. What would von Schlieffen or von Falkenhayn have to say to-day to political war aims which demand that German strategy should plan an incursion into the Ukraine?

4. MILITARY CONCENTRATION IN THE WEST

German military theorists almost unanimously adopted von Schlieffen's demand for a decisive offensive in the West. Schlieffen's axiom: "The whole forces of Germany must be hurled against one opponent, the one which is strongest and most dangerous, and that can only be Great Britain and France in the West," retained the force of a strategic law in German military circles. The lessons of the World War have confirmed the correctness of Schlieffen's thesis, and the historians of the World War regard it as definitely proved. Only the Western front offered tangible objectives for an offensive, and at the same time the transport facilities for a rapid attack on a mass scale. Colonel Hierl declares that the Western front represented the *higher aim.* And General Kabisch writes:

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[1] General von Falkenhayn, "*Die Oberste Heeresleitung*", Berlin 1920, p. 130.

> "If Germany intends to crush one of her opponents inside one or two months and to such an extent that thereafter he can be held easily by a comparatively small part of her forces, she can do it only on the Western front. Only the Western front offers possibilities for rapid deployment, a dense railway network of normal European gauge, and an important urban centre, Paris, fairly near to the field of operations, and therefore only on this front is there any hope of winning a more than ordinary victory, a really decisive victory." [1]

The excellent work issued by the *Reichsarchiv* contains the following concerning politico-military developments before the World War:

> "The reasons for seeking a rapid decision in a war on two fronts, and for attacking first of all on the Western front in order to secure it, had become more and more urgent in the meanwhile." [2]

The World War proved conclusively that an effective offensive in the West is possible only if Germany is prepared to abandon all thought of a simultaneous offensive in the East. Simultaneous offensives are absolutely out of the question: offensive operations against Russia make an attack on France impossible. The limitations of Germany's military strength were made clearly visible in this problem. The presence of German forces on the Eastern front beyond the absolute minimum necessary to cover the German rear against Russia necessarily endangered Germany's offensive powers against France; any serious concentration of German forces on the Eastern front necessarily ruined the chances of a German offensive on the Western front. General von Falkenhayn writes:

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[1] General Kabisch, "*Die Streitfragen des Weltkriegs*", Stuttgart 1924, p. 54.

[2] "*Weltkrieg 1914–18*", issued by the *Reichsarchiv*, Berlin 1925, Vol. I. p. 15.

> "Any attempt at changing over to the East, whilst the front in the West was still unconsolidated, must necessarily lead to an intolerable situation in the West without offering any hope of obtaining a decisive success in the East. . . .
>
> "It was a very serious mistake to believe that our enemies in the West would capitulate if and when Russia was beaten. No decision in the East, no matter how thorough it might be, could have spared us the fight to a finish in the West, and Germany should have remained ready and prepared for this under all circumstances. This was not the case if forces were held in Russia's endless plains which were urgently necessary in France to hold on until the moment of decision or to obtain the decision itself.
>
> "However, it would have been necessary to use such forces in the East in order merely to attempt to obtain the desired decision against the Eastern giant. And even then it was by no means certain that the desired aim would be achieved." [1]

The sending of strong forces to the Eastern front thus offered no guarantee that a victory over Russia would be obtained, but it did give an absolutely certain guarantee that no victory could be obtained over France.

The situation was even worse than that: there was even a possibility that the binding of large German forces on the Eastern front would endanger the defence against the French and British armies in the West. General Kuhl frankly recognised this terrible danger to Germany's prosecution of the war:

> "The attack on Russia thus demanded very considerable forces so that not enough were left for the defence in the West." [2]

The military leaders of Germany during the World War discovered that certain important consequences resulted for both fronts in the event of a big German offensive on the Eastern front: an offensive in the East cannot obtain the desired objective, but as a result of that offensive the defence in the West may break down.

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[1] General von Falkenhayn, "*Die Oberste Heeresleitung*", pp. 47–8.

[2] General von Kuhl, "*Der deutsche Generalstab*", Berlin 1924, p. 186.

5. DANGERS IN THE WEST

A factor of paramount importance now arises: the extreme sensitiveness of Germany's Western frontier to any serious threat. Germany's main economic centres lie close to this frontier, and a retreat of 100 miles behind the frontier would lead direct to economic catastrophe and military collapse. Förster writes:

> "The disagreeable situation for a weak German Army from the beginning was the fact that it must fight, willy-nilly, near the frontiers even against a much stronger enemy, because otherwise it would have to abandon important economic centres, for instance the industrial districts of Lorraine and the Saar Basin, and see industry come to a standstill in others, for instance in the Rhineland and Westphalia. At the same time defensive operations forced on the German Army near the frontier could be conducted only under extremely unfavourable circumstances. Thus for the successful waging of a war on two fronts the protection of Germany's economic centres in the West was more important than the protection of the harvest supplies in the country East of the Vistula." [1]

German military experts thus frankly admit that the French Army has a big chance of conducting a successful offensive because a comparatively short advance would open up the way into the heart of Germany's most important industrial districts. Germany can therefore not renounce her plans for an offensive in the West because to do so and remain on the defensive means almost automatically that France will take the offensive. In other words, the capacity of the French Army for conducting an offensive depends on the activity of its Russian allies. During the World War it was the inability of the Russian Army to carry out any big offensive operations against Germany which robbed France of the possibility of developing an offensive. Colonel Hierl makes the following significant observations:

> "In the event of Germany remaining on the defensive in the East her military leadership could reckon with the cumbrous slowness of Russian military movements and with a German operative

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[1] Forster, "*Graf Schlueffen und der Weltkrieg*", Berlin 1924, pp. 23–5.

superiority. In the event of a defensive on the Western front, on the other hand, Germany would have to defend important industrial centres against a French Army capable of launching an offensive, and the crisis would therefore result earlier." [1]

Germany was able to concentrate the major portion of her military forces on the Western front during the World War only because she had no need to fear a serious Russian offensive, but even success on the Eastern front was not sufficient to prevent her defeat on the Western front. General Gröner is quite right when he declares:

> "If defensive action in the West had ended in a retreat behind the Rhine, then the biggest success on the Eastern front might easily have proved a pyrrhic victory." [2]

That was in reality the result of the whole German campaign in 1914–18: German successes in the East were pyrrhic victories which led to unsuccessful attacks in the West and finally to the collapse of the German defence. The three years during which Russia waged a defensive war prepared the way for the final victory of the Allied powers in 1918. That was how the relations between the two fronts in a two-front war waged by Germany worked themselves out during the last one. That was the form in which German militarism tasted to the dregs the bitter reality of a two-front war. What prospects are opened up for Germany to-day by a war on two or more fronts?

6. A NEW DEPLOYMENT OF FORCES

All the calculations of German strategy for a two-front war before the World War and during its course have now been upset by a completely new fact: the existence of the Red Army. For the first time in history the most powerful land force in a European defensive coalition, Germany's most powerful military opponent, is in the East and not the West. On the Eastern front Germany will now have to contend with an army whose strength lies not merely in numbers, but in numbers multiplied by modern military technique and a strategy of offensive. This army is superior in strength to the German Army not only in numbers, but also in armaments. The military leaders of Germany must reckon that in the event of a war on several fronts they will have to contend with a Red Army on a war footing of perhaps 300 Divisions supported by between 8,000 and 10,000 aeroplanes and between 10,000 and 12,000 tanks. This army will combine all the advantages of more powerful armaments and the greatest possible mobility. The Eastern front will take on a new significance in the next war, and for the first time German strategy will have to reckon with the problem of hostile forces stronger than its own. This fact not only upsets the German plan of deployment on the Eastern front as it existed in 1914, but it revolutionises the whole strategic conception of the two-front war as it was fought in 1914–18.

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[1] Colonel Hierl, "*Weltkrieg in Umrissen*", Charlottenburg 1922, Vol. I, p. 15.

[2] General Groner, "*Das Testament des Grafen Schlieffen*", Berlin 1928, p. 103.

However, the political urge for a strong offensive in the East is more strongly marked in National Socialist Germany than it was in Hohenzollern Germany in 1914, and Germany's present alliances are almost exclusively directed against the Soviet Union: Japan, and perhaps Poland. The territorial situation of Germany's allies to-day determines to a far greater extent than in 1914 that Germany shall throw herself primarily against the Soviet Union. These alliances have developed primarily on the basis of an anti-Russian policy, and with a view to obtaining a military superiority over the Soviet Union. The Soviet Union, lying between Japan on the one hand and Germany and Poland on the other, is the most directly threatened enemy of National Socialist Germany. Germany's alliances are effective on land only against the Soviet Union, not against any other powers. Further, the immediate material objectives of conquest are sought by National Socialist Germany on the territory of the Soviet Union, and she has an ideological cloak for her aims in the shape of the "Struggle against Bolshevism". National Socialism is never likely to give up this idea of organising the struggle against the Soviet Union as an international punitive expedition against Bolshevism or at least, of presenting it to the world in this guise. It regards such an attempt as creating possibilities of a *rapprochement* with the Western powers, and in particular with Great Britain. If it is at all possible to localise a first class-war, then only on the Eastern front, where Germany could reckon with the maximum number of allies and the minimum number of enemies. When Schlieffen was drawing up his strategic Western plans he declared: "What we won in 1871 will be defended on the Seine, not on the Narev or the Bug." Hitler would very much like to vary this thesis: "What we lost in 1918 will be recovered not on the Seine, but on the Duna and the Dnieper."

National Socialist Germany is being fatally driven towards the East by ideological motives and by her system of alliances, and there she will collide with the Soviet Union, and her army will come to grips with the strongest military force in two continents. The German Army and Germany's war potential in general will be subjected to a tremendous strain, and so will German strategy, which has never since the days of Frederick the Great had to reckon with an opponent stronger than itself in the East.

7. POLICY AND STRATEGY ON THE WESTERN FRONT

Military factors and the general relation of forces have changed tremendously since 1914, but this change affects the Western front least of all. The offensive strength of Germany has increased very considerably, but also the French powers of defence, and to a lesser extent the Belgian also. It is to a certain extent possible to speak of a strategic *status quo* in the West. In any operations on the Western front Germany would have to concentrate the greatest possible strength in numbers, fire-power and mobility. If the German Army again attempts an offensive on the Western front against France and Belgium it will have to concentrate at least the same military forces as in 1914, and in that case the major portion of Germany's military strength will again be tied down in the West. Despite the greatest possible concentration of forces on the Western front, Germany never had enough troops there: not on the Marne, not at Verdun, not even during the March offensive of Ludendorff in 1918. Referring to the unsuccessful German attacks on the Nancy–Epinal line in August 1914, General Klingbeil[1] declares: "The forces available were insufficient to perform the tasks set." And it is now admitted that from beginning to end the German operations against Verdun were hopeless, and General Wetzell writes:

> "How could it have been at all possible with a reserve of no more than 25 Divisions, when the enemy had reserves double that strength, and still greater superiority in artillery, aircraft and munition?"

And he adds: "The attack ordered by the Supreme Army Command was beyond the strength of the German Army".[2] In the next war on the Western front Germany's requirements will not have grown less.

Nevertheless, military strategy demands that the main blow should be launched against France and Belgium. All Schlieffen's old arguments come to life. For half a century German operative theory has thought in terms of Western European territorial conditions and objectives. The whole military technique and strategy of the new German Army are directed to a repetition of the violent battles of 1914 on the Western front: the motorisation, the formation of a shock army, the powerful air arm, and the theory of lightning decision.

But what is strategically desirable may be politically dangerous. In any war against the Western powers National Socialist Germany, which likes to present itself to the world as the defender of European culture against Bolshevism, will threaten the violent break-up of the European capitalist system, and her weapons of destruction will be directed against the heart of Western civilisation. Every blow delivered against France must lead to an extension of the Western front and to the extablishment of a defensive front of France, Belgium and Great Britain at least, with the U.S.A. in the background as an economic and political reserve, and probably as a military reserve as well. Germany cannot launch an attack in the West without risking the establishment of a hostile coalition of powers and its almost unlimited extension during the course of the struggle. In the present situation a war against the Western Powers is practically identical with an all-in war against the rest of Europe pure and simple. The fatal distribution of forces which caused Germany's defeat in the World War threatens to recur, and the contradiction between a strategy which promises military success and a policy in accordance with the given situation is becoming acute. The cleverer German military experts did not fail to see this terrible dilemma even during the preparations for the World War, and General Gröner writes:

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[1] General Klingbeil in the "*Militar-Wochenblatt*", July 4th, 1936.

[2] General Wetzell in the "*Militar-Wochenblatt*", August 25th, 1936.

> "A political understanding with Great Britain translated into military terms meant the abandonment of any offensive against France, and therefore the abandonment of victory altogether in Schlieffen's sense." [1]

Gröner regards an understanding between Germany and Great Britain as unacceptable in a military sense because it could be obtained only at the price of abandoning an offensive against France and Belgium, and he believes that Germany must chance the formation of a hostile Western coalition against her. An effective German strategy in the West must necessarily bring in Great Britain, whilst a good German foreign policy in the West, i.e., an understanding with Great Britain, excludes the possibility of any successful offensive against France. The more effective the strategic plan becomes the more fatal are its political consequences, until finally politics give Germany's enemies the upper hand and ensure her strategic downfall. We have seen Gröner's solution: an understanding with Russia which would relieve Germany politically and militarily, and permit her to wage war in the West undisturbed. The advent of National Socialism in

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[1] General Groner, "*Der Weltkrieg und seine Probleme*", Berlin 1920, p. 37.

Germany, if nothing else, makes this solution impossible. Whilst German strategy still clings to the Schlieffen Plan in the West, National Socialist foreign policy burdens it with the added task of waging war against the Soviet Union in the East—and under very different conditions from those prevailing in 1914.

8. THE STRATEGIC CONSEQUENCES OF THE MUNICH AGREEMENT

The Munich Agreement has altered the strategic situation of Europe in Germany's favour. Czechoslovakia has been eliminated as a military factor, and the changed position in Central Europe is of the greatest importance for the whole of Europe. The existence of a strong and vigorous Czechoslovakian State made the conditions for a war on several fronts very different for Germany in 1934–38 from what they were in 1914. A German attack would have had to face much greater obstacles, and, correspondingly, the position of a European defensive coalition would have been incomparably more favourable than it is to-day. The South-Eastern front of the Central Powers in 1914–18, the front against Serbia and Roumania, required much less effort on the part of Germany and was much less dangerous in its implications than the Central European front which would have resulted from any German attack in that direction up to the time of the Munich Agreement. It is therefore a matter of considerable importance that the real significance of the strategic revolution brought about by that agreement should be examined.

Prior to her dismemberment Czechoslovakia was a quite considerable military power, capable of putting an army of 40 Divisions into the field. Czech troops were well trained and excellently equipped, being in particular very well supplied with automatic weapons and supported by powerful artillery, tanks and aeroplanes. In addition they would have had a good strategic position behind very strong defences.

For an attack on Czechoslovakia which was to have had any chance of success, Germany would have needed about 60 Divisions, and in the autumn of 1938 there were, according to official German information, no less than 30 German Divisions concentrated for the first line of attack against Czechoslovakia.

Prior to her dismemberment Czechoslovakia was excellently suited, both territorially and militarily, to be the advanced post and the organiser of a great defensive coalition of South-East European States, and she represented the strongest barrier to German military and political expansion towards the East and the South-East. During the World War the Central Powers dominated this area, and from the very beginning Austria-Hungary and Turkey held it in two enveloping arms. The Russian war historian General Sayontchkovski writes as follows concerning the situation on the South-Eastern front during the World War:

> "Turkey's entry into the World War on the side of the Central Powers in November 1914 was a great success for Germany. Not only did it cut off the only convenient means of communication between Russia and her Western allies, but it also gave Germany a powerful basis for her diplomatic operations in the Balkans, and for her military struggle against Serbia. A victorious Austria in the North and a belligerent Turkey in the South could encircle Bulgaria and Roumania." [1]

The existence of an independent and vigorous Czechoslovakian State prevented the restoration of the Central European situation as it existed in 1914–18, i.e., the mobilisation of the South-Eastern districts of the old Austro-Hungarian monarchy under German hegemony, and finally, it hampered any German attack in Europe because Czech military strength lay along the weakest German frontier, and held the key to Silesia, Central Germany and Eastern Bavaria.

Further, Czechoslovakia held more than a strategic key position of purely local significance; she represented the most important link between the two wings of the great continental defensive coalition, and her position permitted her to defend both Western and Eastern Europe—prior to the Munich Agreement. A German military journal wrote as follows concerning the great strategic importance of Czechoslovakia:

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[1] General Sayontchkovski, "The World War" (Russian), Moscow 1929, p. 280.

> "Czechoslovakia is of the greatest importance for her allies in the West and in the East because she represents a military bridge between them. In 1914 there was no such area relatively near to both France and Russia, and in comparison with the pre-war period therefore it is of tremendous importance for France and Russia that they have an ally in Central Europe. The joint military objective of France and Russia would therefore be to link up with Czechoslovakia. The shortest means of communication between France and Czechoslovakia lie through Central and South Germany, between the course of the Main and the Rhine Alps." [1]

Thus, as German military experts frankly admit, a policy of collective security would have held very high military trumps: a German attack anywhere in Europe would have been attended with terrible risks, because, thanks to the existence of Czechoslovakia, the Red Army would have been able to drive forward into Central Europe without much difficulty, and at the same time the French Army would have had a promising objective for a drive through South Germany towards Central Europe. The extra task of subjugating Czechoslovakia by force of arms would have meant a war on three fronts for Germany—an utter impossibility for her to sustain. It would have meant that she would have been unable to carry out the tremendous concentration of troops on the Western front which threatened France in 1914, and at the same time unable to leave sufficient troops on the Eastern front to hold up the superior forces of the Red Army. An extremely dangerous situation for Germany would have developed in the air, too: first of all, considerable German air strength would have been engaged against Czechoslovakia, and secondly Germany would have had to reckon with terrific air reprisals from Czech territory carried out by the powerful Soviet air arm. Thus Czechoslovakia represented a very important factor in the air security of the Western powers—not only France, but also

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[1] The "*Militar-Wochenblatt*", December 18th, 1935.

Great Britain. Two years ago a former French War Minister, Colonel Fabry, wrote in "*L'Intransigeant*":

> "It is up to Great Britain to say whether she will permit the aerodromes of Bohemia to be raided; by threatening Berlin they indirectly defend London."

The Munich Agreement has, of course, completely changed the situation. Owing to the loss of her fortifications and of large slices of her territory, Czechoslovakia is no longer in a position to defend herself effectively, and her mutilated remnants no longer form a geographical and economic unit. The centres of her armament industry, Pilsen, Olmütz, Brunn, etc., are now no more than 10 or 20 kilometres away from Germany's new frontiers, and Prague itself could be bombarded by heavy artillery from German territory. The industrial areas Bratislava and Moravian Ostrau could now rapidly be occupied by mere German frontier detachments. Owing to the loss of rail and other transport facilities, the Moravian industrial areas have now been in effect cut off from Bohemia, as Ruthenia has been separated from Slovakia.

Germany's direct territorial and other gains from the Munich Agreement have been considerable. Her population has increased by 3·5 millions, including about 300,000 men who have been fully trained in the Czech Army. She has obtained important industrial areas, and, above all, she has occupied a dominant strategic position which will serve her as a wide-open gate commanding Central and South-East Europe.

But her immediate material gains pale into insignificance beside the enormous improvement in her strategic position. She has been able either to occupy, or where she does not yet occupy to control, the key positions in Central Europe. There is no longer any barrier to her military, political and economic expansion into South-East Europe. An independent and vigorous Czechoslovakian State barred Germany's access both to the Basin of the Danube and to Ukrainia. Now that Czechoslovakia has been dismembered and handed over to German control that barrier no longer exists, and Germany's possibilities of military expansion in South-East Europe are now almost unlimited. She can turn Ruthenia into a base of operations against Roumania or against Ukrainia, and she can use it as a flanking position and as a threat against both Poland and Hungary.

The economic policy of Goering and Funk now aims at making all the States of South-East Europe militarily dependent on Germany by economic penetration, by monopolising their import and export trade, and by linking them up with the German economic system. Germany has no longer any serious military opponent in South-East Europe. Should any of the South-East European States, Roumania, Yugoslavia or Hungary, attempt to offer resistance it would be seen immediately that the strategic advantage given to Germany by the Munich Agreement is overwhelming. There is now no country in Europe which can take the favourable position occupied by Czechoslovakia prior to that agreement. Should Roumania, Yugoslavia or Hungary resist, the fighting would take place on the Lower Danube, and not along the Elbe.

The liquidation of Czechoslovakia by Germany was carried out as something even more important than the settlement of a local problem fundamentally affecting the whole position in South-East Europe; Germany's leaders carried out a strategic coup of European importance. Germany hegemony in South-East Europe, now established by the successful drive over the mountains of Bohemia, was not an end in itself, but a means of strengthening Germany for the coming European war. Hitler destroyed Czechoslovakia: not only as the spearhead of the Little Entente and the Balkan Alliance, but as the strategic link between France and the Soviet Union. The European East–West block in its defensive struggle against German aggression was to be deprived of the opportunity of mobilising its forces in Central Europe along Germany's Southern frontiers. Germany's move was the preventive abolition of the third war front in Central and South-East Europe.

With the elimination of Czechoslovakia German strategy may now reasonably hope that in the worst case Germany will be faced with the two-front position of the World War, and that she is now relieved of the nightmare of a war on three or more fronts. German strategy can now return with a lighter heart to the old problem of the Schlieffen Plan: a big offensive in the West or in the East?

The Munich Agreement greatly lightened the task of German strategy, but it did more than this: it provided new arguments and new military trump cards for either variant of the Schlieffen Plan. It must be remembered that the preparations for the campaign against Czechoslovakia carried out in the summer and autumn of 1938 were accompanied by two important military measures: the building of a line of defences on the German West frontier and a great increase in German air strength. If Czechoslovakia had not been left to her fate, neither of these measures would have been of decisive importance, but with the elimination of Czechoslovakia as a military factor they begin to take on very considerable significance.

There are now two new arguments in favour of a German offensive in the East. Germany's path is now free for an attack in Eastern Europe, and without much difficulty she can turn the valley of the Danube into a base of operations against the Soviet Union. The second argument is that her new system of fortifications in the West will immobilise the French Army, and make it possible, in theory at any rate, to leave only a thin covering line of troops in the West whilst concentrating the overwhelming weight of her military strength in the East. The difference in strategic function possessed by the fortifications before and after the Munich Agreement is obvious. Whilst Czechoslovakia was still an important military factor the fortifications could never have served Germany as a protective screen behind which she could concentrate her forces for an Eastern offensive, for the simple reason that Czechoslovakia would have held large forces of German troops in Central Europe. Now, however, Germany reckons with the possibility of being able to concentrate the overwhelming strength of her military forces for an offensive in the East under the protection of her system of fortifications in the West.

On the other hand, there are three important new arguments in favour of a German offensive in the West. Germany can now reckon with obtaining a sufficient agrarian and raw-material basis in South-East Europe to make protracted military effort in the West possible, i.e., in German terminology she has become "blockade proof". At the same time Germany has the free disposal of very considerable military forces which she formerly proposed to use for the subjugation of Czechoslovakia, and the relief of pressure in Central and South-East Europe will permit her to concentrate great masses of troops against France once again. The French General Dufour writes:

> "Czechoslovakia having been reduced to military impotence, the whole of the German Army is henceforth available for the exercise of pressure on us in support of new German demands, and, if necessary, to attack us."[1]

Secondly, although even the most massive concentration of German troops in the East cannot give Germany any numerical superiority over the Red Army, such a concentration against France in the West would very rapidly achieve that superiority now that Czechoslovakia no longer exists—particularly in alliance with Italy.

Thirdly, the possibility of mass air attack in the West opened up by the elimination of Czechoslovakia makes the Western variant of the Schlieffen Plan particularly tempting. The Soviet Union is almost invulnerable from the air, and if the new and powerful German Air Force is to have some promising objective it must turn towards the West. From the standpoint of air strategy therefore the abandonment of Czechoslovakia raised a double threat to the Western powers: first of all the German air strength intended for use against Czechoslovakia is now free for use on the Western front, and secondly a European defensive coalition would no longer have Central Europe as an important strategic base for air reprisals. After the Munich Agreement had been signed and the dismemberment of Czechoslovakia was well under way, Goering's mouthpiece, the "*National Zeitung*" of Essen, wrote triumphantly:

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[1] In an article in the "*Epoque*", October 8th, 1938.

> "The destruction of this air threat represents an automatic relief of pressure on Germany and at the same time a great increase in her air potentialities."

The elimination of Czechoslovakia has enormously increased the danger to the Western Powers from the air. At a rough estimate we may say that had war come in 1938 Germany would have had about 5,000 first-line planes, approximately 2,000 of which she would have had to use against Czechoslovakia, leaving her 3,000 for use in the West. However, if war comes in 1939–40, let us say, Germany, having in the meantime doubled her air strength, will no longer have to deal with Czechoslovakia and will be in a position to concentrate all her 10,000 planes against the Western Powers, and the pressure would not be relieved by air reprisals from Czech territory.

9. 1914–18—THE LAST OF THE SCHLIEFFEN PLAN

The Munich Agreement thus tended to restore the two-front position of 1914, because the third front against Roumania and Serbia during the World War had no independent significance. In 1914–18 Germany failed to solve the problem of waging even a two-front war, and in the end she succumbed to what had then developed more or less into a one-front war in the West. The Munich Agreement has fundamentally changed conditions in Central Europe, but it has not brought about any such change in the conditions under which Germany would have to wage a two-front war. The question therefore arises: to what extent is Germany's strategic situation in 1939 different from that of 1914? In comparison with the situation which existed prior to the Munich Agreement, Germany's strategic situation has been considerably improved, but in comparison with 1914 the relation of military forces in a two-front war still remains distinctly unfavourable to her.

However, in any European war Germany would again have the big advantage of territorial unity, giving her an inner line of communications with a single transport system and co-ordinated leadership. The German military historian Eltze considers this circumstance to have been the one important advantage possessed by Germany over her enemies during the World War. Germany's prosecution of the next war will be very definitely aggressive: present-day German strategy cannot contemplate for one moment the waging of a war with limited objectives and with limited means. A strategic plan such as the one proposed by Hans Delbruck for the conduct of the World War—the establishment of a powerful defensive barrier against France, the renouncing of any attempt to violate Belgian neutrality, and the launching of a cautious offensive against Russia—is absolutely out of the question for Germany's military leadership to-day. Such a solution would be neither possible nor desirable. The binding of any strong German forces in the West would make impossible any rapid and successful offensive against the Soviet Union, the stronger enemy, or even any effective defence against the superior forces of the Red Army. The strategic solution proposed by Delbruck is of no use in a war aiming at the establishment of German hegemony in Europe. Even in 1914, and in the best case, it could have brought only an ordinary military victory in the East, and never a triumphant victory deciding the European struggle as a whole. In the event of success such a plan would have resulted in a *partie remise*, and not in the "German Peace", the victorious peace German militarism required. It is immediately obvious therefore how impossible such feeble half-measures are for the totalitarian war which National Socialist Germany is preparing.

Military aggression, yes, but where? How far is the German war plan of 1914, i.e., the Schlieffen Plan, still operable to-day?

The Schlieffen Plan laid down the fundamental principles and the limitations of German strategy on the eve of the World War. It declares, (1) that a successful opening offensive in the East is not possible, and (2) that a victorious German offensive in the West is possible only on condition that the overwhelming mass of the German Army is concentrated there, whilst no more than a thin defensive line is left in the East against Russia.

The first, negative, principle of Schlieffen's strategy is still applicable to-day, and, in fact, far more so than it was in 1914. Schlieffen declared that a success by surprise in the East, i.e., a strategic, decisive victory over Russia, was impossible, although Russia was at that time the weaker of Germany's enemies. It is obvious therefore that such a victory to-day against a powerful army equipped with the last word in military technique, against the strongest amongst Germany's enemies, is absolutely out of the question. This first principle of Schlieffen is so incontrovertible that it puts the whole of the Schlieffen conception out of action altogether. The Schlieffen Plan did more than lay down the operative technique for an attack in the West; it also contained a solution of the problem of a two-front war. This solution was based on the possibility of leaving only about one-eighth of Germany's military forces in the East as a thin defensive line against Russia. This possibility no longer exists to-day, and because it no longer exists the whole Schlieffen Plan is inoperable. The military strength National Socialist Germany will need when she tries conclusions with the Soviet Union may be calculated in two variants: one for an offensive, and the other for a defensive. Both variants must be calculated on the basis of the relation of military strength of the two countries involved. The calculation of 300 Divisions as the strength of the German Army on a war footing, as given in the "*Deutsche Wehr*", is not at all fantastic, but it must not be forgotten that if necessary the Red Army can be brought up to a war strength of 400 Divisions. During the World War the calculation of 2.5 Divisions per million inhabitants was not excessively high, and towards the end of the war Germany even had 3.5

Divisions per million inhabitants. To-day both the two big military powers, Germany and the Soviet Union, would be in a position to achieve their maximum military strength very rapidly. However, of the 300 Divisions of the German Army only about 100 Divisions will have had a normal military training; these are the first-line Divisions. The second 100 Divisions approximately will consist of men who have had a certain amount of military training in the semi-military organisations, whilst the third 100 Divisions will have more or less a militia character and consist of civilians who have had no proper military training. The raising of this army of 300 Divisions will completely exhaust Germany's man-power reserves. The 400 Divisions of the Red Army, on the other hand, will all consist of reservists who have had a normal military training, and over and above this enormous strength there will be reserves of a militia character available to supplement the regular forces. The numerical relation of forces between the two armies will therefore be something like 2 : 1 in favour of the Red Army, and at the same time any superiority in armament on the part of the German Army is out of the question. These facts are of great importance because they determine what military forces National Socialist Germany will need on the Eastern front in the next war. If Germany intends to wage an offensive war against the Soviet Union, then she will need her whole army to do it with, and she will be able to leave only a very weak defensive line on her other frontiers, such forces as she left on her Eastern frontier in 1914. The strategic contradiction is obvious: "A war against Russia with an undefeated France in Germany's rear is impossible", declares the classic military work issued by the *Reichsarchiv* on the military situation in 1914.[1] Even in the most favourable case, in the event of a military alliance with Poland against the Soviet Union, Germany would require several weeks, and even perhaps months, before she could possibly organise her base of operations and her lines of communication on the Soviet frontier. But in that period of time France would have fully completed her military mobilisation on the basis of the *nation armée*, and up to 100 French Divisions would stand prepared for a thrust against a weakly-guarded German Western frontier.

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[1] "*Weltkrieg 1914–18*", Berlin 1925, Vol. I, p. 17.

Schlieffen's calculation that a weak German line would suffice to guard against Russian attack is no longer applicable to the present situation. In order to hold up a heavily-armed and extremely mobile mass army like the Red Army, Germany would need the greater part of her military strength, and even then the chances of success would be doubtful. Not one-eighth of the German Army, as was the case in 1914, but between two-fifths and three-fifths of Germany's military forces will be tied down to the Eastern front from the beginning in any future war. Considered objectively and in accordance with the new relation of forces in Europe, the decisive problem of German strategy in a war on several fronts must be the maintenance of a successful defensive against the Soviet Union, against a stronger enemy almost unassailable on his own territory. To-day German strategy must do a little cool calculation of military technical factors and numerical magnitudes, and at the same time envisage a possibility which no previous German Army Command from Schlieffen to Ludendorff ever needed to take into consideration, namely the possibility of a German defeat in the East. The existence of this possibility revolutionises the whole politico-military situation of Europe and gives the *coup de grâce* to the Schlieffen Plan.

The necessity of leaving the major portion of Germany's armed forces in the East disposes of all possibility of fulfilling Schlieffen's other principle: the massive concentration of the German Army in the West. However, the military requirements of the Western front will not be less in the next war than they were in the last, whilst Germany's military requirements on the Eastern front will be very considerably greater, and these increased demands can be satisfied, if at all, only at the expense of the Western front, on which seven-eighths of the German Army was concentrated in 1914. Even this enormous concentration of military forces proved insufficient to achieve its objectives, and even with it the German Supreme Command was able to take the offensive in one direction only: along the North-East sector.

The most recent German history of the World War writes as follows:

> "It was not possible in view of the limited resources at the disposal of the German Army on the Western front to hold Alsace-Lorraine and prepare a Cannae for the French in Lorraine, whilst at the same time conducting an enveloping movement through Belgium and Northern France."[1]

The expression "limited resources" is hardly applicable, because in reality the whole of Germany's military strength, with the exception of the weak VII Army, which was in East Prussia, was concentrated in the West. Thus the very maximum concentration of German military effort proved insufficient to achieve victory, and to-day German strategy could organise no repetition of such a concentration of forces because objective circumstances render it impossible. However, with the impossibility of any massive concentration of Germany's military forces in the West, arises the further impossibility of any rapid decision, of any quick German victory, because it is conceivable only in the West. If the new German strategy is nevertheless determined to cling to the idea of launching the first blow in the West, and many indications suggest that it is, then it is taking the terrible risk of a defeat in the East. If the leaders of the German Army are planning a new attack on France and Belgium it means that they are using only one part of the Schlieffen Plan, which was at the time when it was drawn up and in the circumstances in which it was intended to function a thoroughly serviceable guide for the conduct of a two-front war, and not merely an operative guide for the war in the West. To-day, however, a lightning blow against France and Belgium would not be the shortest way to victory in a war on several fronts, but a strategic flight away from the circumstances and dangers of that war, a flight which would at the same time uncover the other front. The

[1] "*Handbuch der neuzeitlichen Kriegswissenschaft*", Berlin 1936, Vol. I, p. 290.

relations between the battle fronts which gave rise to the Schlieffen Plan no longer exist, and therefore the plan itself has become obsolete in every important particular.

To-day entirely different relations exist between the battle fronts. In Schlieffen's time, and even in that of his successors, the rapid overwhelming offensive against France and Belgium represented the decisive operation within the framework of a two-front war. Victory over France was identical with final victory, the victory in a coalition war against all enemies. The military collapse of France in 1914 would automatically have spelt military defeat for Tsarist Russia. To-day the situation is different: even a hypothetical German victory over France would not in the given relation of forces to-day mean the strategic final victory in a war on two fronts. General Groner speaks of the Pyrrhic victory won in the East by Germany during the World War. In the coming war, on the other hand, the possibility of a Pyrrhic victory for Germany in the West is not inconceivable. To-day the strongest forces and reserves of a European defensive coalition would lie in the East and South-East, whereas during the World War they lay in the West. An Eastern-European block under the military leadership of the Soviet Union would be in a position to defeat Germany even after Germany had perhaps defeated France in the West. The way to Stettin, Berlin, Breslau and Dresden can be opened after Lille and even Verdun have fallen. German strategy to-day must reckon with the effects of a Red Army offensive on the operations in the West, for the Red Army can lend valuable support to France both in attack and defence. The younger Moltke even admitted the possibility that "a Russia victorious along the whole line and marching uninterruptedly on Berlin would encourage France to put up the utmost possible resistance even after the severest defeats". This possibility did not materialise during the World War because the offensive power of the Tsarist Army was not strong enough, and its importance for its allies lay in the best case in a stubborn defence, i.e., essentially in passive resistance.

To-day the situation is different. Once they swing into action the means of offence at the disposal of the Red Army can develop such powerful and far-reaching offensive operations that the French Army may get a chance of taking the offensive in a comparatively short space of time.

And at this point a factor arises which was recognised by Germany's military experts on the basis of experience during the World War, namely the particular vulnerability of Germany's Western frontier. Germany's economic centres can be reached more rapidly from the West than from the East, and in consequence it might be possible for a French Army to take advantage of a big Soviet offensive in the East and force the strategic decision in the West. Thus the victory of the European defensive coalition might easily be prepared in the East but realised in the West. The crossing of the Vistula by the Red Army might easily open the way across the Rhine for the French Army. Assuming that the major portion of Germany's military strength will be concentrated in the East, the French Army would be in a position to launch an offensive immediately after the mobilisation of its forces and their concentration on the frontier. A French military expert writes as follows on France's strategic aims in the event of war:

> "After our concentration has been completed we must attack the enemy's front and break through it. We must throw back the forces of the enemy beyond our own frontiers, and carry the war into his own territory."

Thus the great increase in Russia's military strength has doubly liquidated the Schlieffen Plan: in the East and in the West. The two main strategic pillars of the plan (the possibility of leaving only a comparatively small force in the East to cover Germany's rear, and the possibility thus given of a powerful concentration in the West) must collapse at once in face of a powerful Red Army taking the offensive. Voroshilov and Shaposhnikov have made Germany's 1914 war plan obsolete. The decisive difference in the military situation of Europe in recent years as compared with that which existed in 1914 was not the existence of Czechoslovakia, but the greatly increased strength of the Red Army as compared with the old Tsarist Army.

During the course of a two-front war, however, a third front will inevitably arise against Germany in South-East Europe despite the Munich Agreement. Julius Deutsch, the former Austrian War Minister, declares in an article entitled "The Post-Munich Military Situation": [1] "It is quite conceivable that a new barrier to German expansion will arise on the Vistula and the Lower Danube". There are two reasons for thinking this; first of all, as Deutsch points out, there is "the strong national vitality of the various peoples of South-East Europe": the national feelings of these peoples are very strong, and their economic interests do not always run parallel to those of Germany. And secondly, the other great powers of Europe are in a position to exercise very effective pressure from outside. The Red Army would have an absolute superiority over any opponent or even group of opponents in the area between the Black Sea and the Vistula, the effective range of operations for the air force of the Soviet Union extends at least to Hungary and Western Poland, and in the Black Sea naval power is also in Soviet hands. Great Britain holds undisputed mastery of the Eastern Mediterranean, including the Aegean Sea. It is quite possible, therefore, and even probable, that in the event of an Italo-German attack intervention could take place from both these areas, thereby encouraging the States of South-East Europe to resist Germany's lust for power. Even Czechoslovakia, dismembered and humiliated, represents a dangerous question-mark for Germany. Under certain circumstances a revival of Czechoslovakia's strategic importance might take place. Thus a war launched by National Socialist Germany as an aggressive two-front war might very easily develop into a three-front war after all. South-East Europe has already proved the grave of German military hopes on one occasion in history, and the lessons of the World War ought to act as a deterrent. The Russian military historians Sayontchkovski, Svietchin and Golovin are unanimously of the opinion that the Central Powers were defeated on this front: the Allied Powers obtained the final victory thanks to the collapse of Austria-Hungary, which began with the Russian victories in Galicia and reached its strategic conclusion with the break-through of Franchet d'Espérey's army at a time when the German Army on the Western front still had considerable reserves and powers of resistance. In other words, the decisive Allied victory on the direct line Paris–Berlin was preceded by decisive victory on the line Paris–Salonika–Vienna–Berlin and it was won in reality on the Danube. In a future European war this same front could arise again and in approximately the same place. A German attack could be countered by a break-through offensive of a European defensive coalition carried forward simultaneously on the lines Paris–Stambul–Danube and Moscow–Kiev–Danube–Mitteleuropa. The Franchet d'Espérey variant would then be supplemented by the Voroshilov variant. A concentric blow developing from this double envelopment would smash the remnants of the Schlieffen Plan to atoms. The problem with which the German General Staff is wrestling to-day is the strategic squaring of the circle.

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[1] Published in "*Sozialistischer Kampf*", October 1938.

10. WHAT DOES GERMAN STRATEGY HOPE FOR?

Can German strategy conceivably find a solution to its problems? National Socialist Germany will do her best to avoid a war on several fronts, and if this proves impossible she will do her best to reduce the attendant dangers. In the sphere of foreign policy she will do her utmost to break up any defensive coalition which may develop against her aggression, to separate Great Britain from France, France from the Soviet Union, and the Little Entente from France. One successful step has already been taken in this direction: thanks to the Munich Agreement she was able to conclude a victorious localised war against Czechoslovakia, and that country has now been prised out of the system of French aliances. National Socialist Germany will do everything possible to narrow down the front of her enemies, to localise any wars which may break out, and to extend the front of her own coalition. One ideal tactical solution for her would be a localised war in alliance with Hungary, Poland, the Baltic States and Japan against the Soviet Union, and another would be a localised war in the West against a France abandoned by Great Britain.

However, in the event of Germany's becoming involved in a war against a defensive coalition of European powers, she will do her utmost to counteract the superiority of her opponents by military means: by her greater war-technical preparedness and by the strategic advantage she would have as the result of a rapid and concentrated attack, i.e., a sudden invasion without any previous declaration of war. Totalitarian war preparations, the mobilisation of the entire economic resources of the country for war, and the new and perfected war technique with its enormous possibilities of offensive operations represent the advantages possessed by Hitler Germany to-day compared with Hohenzollern Germany in 1914, and they encourage the new German General Staff in the belief that Germany would be in a better position to wage a war on several fronts to-day than she was in 1914. The intentions of the German General Staff in the event of a war on several fronts are based fairly evidently on two assumptions. First of all Germany's leaders hope that she will have a still greater military superiority to France than she had in 1914, and therefore a revival of the Schlieffen Plan seems probable. As a guide to a war on more than one front the Schlieffen Plan is dead for German strategy, but as an operative and technical guide to the conduct of operations on the Western front it has pretty certainly retained all its old attractions for the German General Staff. It should be noticed that the Schlieffen Plan is not rendered inoperable by the increased defensive strength of France, but only by the increased strength of a European defensive coalition as a whole. And at this point the second optimistic assumption of Germany's military leaders arises: the hope that this coalition will act without unity and cohesion and without determination, that the coalition war against Germany will be waged inefficiently, ineffectively and planlessly. Under such circumstances, it is felt, Germany, fully utilising the advantage of the inner-defensive line, the strategic initiative and a massive concentration of forces, will be able to crush one enemy after the other, even in a war on several fronts.

Thus two main factors largely govern the possibilities of a German war on several fronts, and the prospects of a defensive coalition war against National Socialist Germany: the defensive power of France, and the practical ability of a European defensive coalition to wage its war against Germany systematically, unitedly and with determination.

CHAPTER VIII

THE MILITARY STRENGTH OF FRANCE

I. THE PRESENT STATE OF THE FRENCH ARMY

FRANCE, OF ALL the big powers, is most endangered by National Socialist Germany. She has neither the natural bulwark enjoyed by Great Britain as a result of her island position, nor the vast spaces of the Soviet Union. The defensive powers of Western Europe as a whole against a German attack depend on the military strength of France. Whether National Socialist Germany will succeed in establishing her military hegemony over Central and Western Europe depends to a great extent on whether, and if so how far, Germany's Army has overtaken the French Army in military strength. The French Army considered alone is neither weak nor strong, and its weakness or strength can be measured only against the military strength of National Socialist Germany. The military predominance of France between 1920 and 1930 was based on Germany's disarmament.

General Weygand writes:

> "The military strength of France as laid down in the laws of 1928 would be sufficient for national security—as against a Germany whose armaments were reduced in accordance with the provisions of the Versailles Treaty."[1]

However, with the tremendous re-armament of Germany the relation of strength between the two countries changed rapidly, and at the beginning of 1935 Marshal Pétain wrote:

> "Our present military strength is based upon our relation to a German Army which no longer exists and which was very different from the German Army of to-day. The disproportion which now

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[1] General Weygand, "*L'Etat militaire de la France*", in the "*Revue des Deux Mondes*", October 15th, 1936.

exists in this respect between France and Germany threatens to become tragic."[1]

If the army of National Socialist Germany is stronger than the French Army in numbers, military technique, cadres and strategic advantage, then not only French national security is threatened, but the security of the whole of Western Europe and non-German Central Europe.

Three factors should be considered in connection with the French Army of 1938–39.

First of all its organic forces, its permanent and stable hypotheses and component parts. France is the biggest financial power on the European continent. Since the end of the World War she has expended over 350 milliard francs for military purposes. Military supplies of all sorts are complete, and the French Army can be readily equipped at full war strength. In the event of war up to 6 million men could be called to the colours, of whom 4·5 millions would be trained reserves. In the question of trained reserves, including the officers' corps (27,000 officers), France takes second place in Europe, behind the Soviet Union, but ahead of Germany. In addition France possesses very considerable reserves in man-power and material in her colonial empire, and they could be readily used for her national defence. The French navy is the strongest navy in continental Europe, and the French fortification system is the finest in the world. This system gives the French Army a unique defensive position and limits Germany's chances of successful attack from the beginning. France has then two other trump cards: an uninterrupted and stable military organisation, which, unlike that of Germany and the Soviet Union, reaches back for many decades, and which has developed (particularly since the Allied victory in the World War) without interruption or set-back; and a tried and tested, cautious strategy which is a combination of mobility, defensive and counter-offensive.

And now we must consider the second factor, the critical period 1927–34 during which the French Army lagged behind both technically and tactically, and lost first place in Europe. In June 1932 the leading Soviet military publication criticised the French Army very severely, declaring that it was backward in military technique, that its equipment was being renewed in accordance with modern ideas only very slowly, and that in consequence most of the equipment was obsolete and cumbrous, the troop units were slow in movement and manœuvre, the operative calculations of the High Command were too methodic and far too slow, and in general the offensive powers of the army were insufficient.[1] This criticism is interesting first of all because it illustrates the attitude of the military experts of a young army based on a high degree of mobility and technical progress, and secondly because it is very valuable in itself.

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[1] Marshal Pétain, "*La Sécurité de la France*", in the "*Revue des Deux Mondes*", March 1st, 1935.

General Allehaut,[2] one of the foremost French military experts and a vigorous supporter of Army reform, quotes this criticism, and speaks of "the stern verdict of a Russian military critic, whose basis in fact one can unfortunately not deny".

French criticism of the French Army is equally interesting. Marshal Pétain has declared that the numerical strength of the army is insufficient and its training inadequate as a result of the short-service term:

> "By an unfortunate paradox we have taken a step towards the militia system at the very moment when the technique of modern warfare is becoming more complicated."[3]

General Castelnau,[4] at one time adjutant to General Joffre on the French General Staff and an Army Commander during the World War, has sharply criticised the condition of the trained reserves, both officers and men, which he declares tends to make the army into a cumbrous machine, immobile and without cohesion. Criticism from civilian expert sources has also been very severe, and it has not been motivated by party considerations. One of the most influential experts on military subjects in France, André Pironneau, writing in the right-wing newspaper "*Echo de Paris*", accuses the French Army of persistent mediocrity, and declares that it lacks any effective weapons for the conduct of a strategic offensive. And the former French Air Minister, the Radical Party deputy Pierre Cot, accused the French Army in the Chamber of Deputies in February 1935 of adopting a policy of passivity and sinking into technical backwardness. Even in 1928 the editor of the Radical Party organ "*L'Œuvre*", Jean Piot, wrote:

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[1] In "*Voina i Revolutsia*", June 1932.

[2] General Allehaut, "*Etre Prêt!*", Paris 1935, p. 197.

[3] Marshal Pétain in the "*Revue des Deux Mondes*", March 1st, 1935.

[4] General Castelnau in the "*Echo de Paris*", November 16th, 1934.

> "Everything is being done as though the Versailles Treaty, which has compelled Germany to modernise her military ideas, permits us to go back to the military routine of 1914—and then fall asleep."

And in May 1936 he wrote:

> "To fall asleep in an atmosphere of apparent calm may be the result of tiredness or laziness. But to close one's eyes deliberately is an act of obstinacy which cannot be too strongly condemned. Have we not been told that the great idea of our General Staff experts is to build a second line of defences behind the first one, and to spend a few more hundreds of millions on concrete? But what about forestalling an enemy attack? And where are our weapons for long-distance activity; where are our Divisions for surprise action? And should the attacking enemy succeed in breaking through our defences, where are the highly-mobile motorised troops to meet and destroy him?"

Such criticism of the French Army has come from all quarters of French public life, from right-wing to left-wing. In conclusion we may quote the Vice-Chairman of the Military Committee of the French Chamber of Deputies, the Communist Gitton, who pointed out in the summer of 1936 that the French Army was insufficiently motorised and still backward in military technical resources.

The strong and thoroughly sound basis on which French military strength rests, and its great potential possibilities, did not prevent these weaknesses and defects from arising between 1928 and 1934. In this period political considerations tended towards disarmament and retrenchment, and military progress slowed down. For the moment, and at least up to 1933, this policy seemed to have some justification because there was no really dangerous enemy anywhere in Europe, but the result was that the French Army developed a definitely defensive and immobile character. When Germany began her tremendous re-armament, and went forward with it at great speed, France did not reply immediately with counter-measures. In this first period of general European re-armament France did not keep abreast of the two young and vigorous military powers, Germany and the Soviet Union, and the French Army surrendered its priority in modern military technique to the German Army and the Red Army. The relative strength of the French Army in a Europe in arms sank.

However, that was a temporary phenomenon only, and we now come to the third factor: the vigorous tendency now operative in French military thought towards modernisation and re-equipment, a readiness to stake everything on the card of quality. An independent air force with definitely offensive tasks is being created (though for the moment its war material is inadequate), the army is being motorised on a wide scale, and French strategy is showing important developments as new possibilities are opening up. Soviet military critics now recognise[1] that the modernisation of the French Army coupled with a careful study of the lessons of the World War will give the French Army the possibility of conducting successful military operations even in the highly-complicated war conditions which may be expected.

2. ARMY ORGANISATION

The possibilities of the French Army can be seen best when they are examined in connection with defensive and offensive elements. In the combination of these two, the former clearly preponderates. If the air force and certain sections of the motorised troops are counted amongst the offensive weapons, the whole organisation of the army must nevertheless appear defensive—and from the structure of the French Army one can more or less read the laws and intentions of its strategy.

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[1] "*Kraznaya Svesda*", April 9th, 1935.

The defensive character of the French Army is confirmed, above all, by its relatively low strength in peace-time. The following forces are stationed in Europe:

20 Infantry Divisions,
4 North African Infantry Divisions,
5 Colonial Divisions,
2 Spahi Brigades,
3 Cavalry Divisions (a fourth is being turned into a light Motorised Division),
1 Light Mechanised Division,
Reserves of the Supreme Command (Tanks and Artillery).

At the beginning of 1939 these forces totalled about 500,000 men, including about 100,000 professional soldiers. In round figures France's peace-time army amounts to about one-fourth the strength of the Red Army, one-third the strength of the German Army, and one-half the strength of the French Army in 1914. Unlike the Red Army and the German Army, the French Army at peace-time strength would not be in a position to launch an offensive. It is very definitely intended as a covering force to hold the frontiers in the event of war, as a strategic curtain behind which, it is hoped, the mobilisation of a mass army on a war footing will take place undisturbed by enemy invasion. The army is intended for use along the fortified frontier, and its position there determines the deployment of the whole army in the great defensive battle which, according to French strategy, will be fought at the very beginning of the war. Beginning from the frontiers we find first of all the garrison of the Maginot Line, then the mechanised troops, which will be the first to be flung into battle, then the motorised infantry reserves, behind them the big and variously composed reserves of the Supreme Command, and finally the new Divisions of the war-time army formed of the reservists. In other words, the location of the French forces represents a deep echelon formation in a defensive position.

The defensive intention of the French Army is also proved by the slowness of its mobilisation. The Divisions of the war-time army must first of all be organised before they can be sent to the frontiers. The Soviet source previously quoted by General Allehaut reckons that 20 Infantry Divisions could be concentrated on the Eastern frontier on the eighth day after the outbreak of hostilities, a further 20 Divisions on the twentieth day, and after a lapse of two months a total of 60 Divisions, rising to 80 Divisions in the first six months and 100 Divisions by the end of the first year of the war. French sources seem to think that even this calculation is too optimistic. General Allehaut regards this slowness of mobilisation as the decisive defect of French army organisation, and he criticises the military institutions of his country as follows:

> "They give us an army incapable of quick manœuvring, with insufficient cadres and insufficient training, with a slow mobilisation, and destined by the gradation of mobilisation to enter the battle front in successive groups."[1]

In the judgement of Marshal Pétain the Divisions which will be formed of the reservists will lag behind the French Army of 1914 in war preparedness and inner cohesion, and they will therefore need time before they acquire their full fighting value. In other words, this represents a further element of time wastage which must hamper any offensive action of the French Army.

3. THE FRENCH AIR FORCE

The military strength of France as a whole is not one-sidedly defensive. French offensive weapons will be a very important factor, particularly because they represent in a sense the sword of Western Europe, the most important and almost the only counterweight to the tremendous offensive force of Germany. The task of launching an immediate and powerful offensive is destined primarily for the air force by French strategy. Guy la Chambre, Chairman of the Military Committee of the Chamber of Deputies and one-time Air

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[1] General Allehaut, "*Etre Prêt!*", Paris 1935, p. 134.

Minister, writes as follows concerning the outbreak of hostilities:

> "The air army should be given the conduct of the whole offensive section of the operations, and the land army should be given the thankless role of holding the front from the North Sea to the Jura, and making it impenetrable."

The development of the French Air Force between 1930 and 1938 reflects the development of French military strength as a whole. In the beginning it held the lead in Europe, the lead it won during the World War. Affected even more than the army by the conservatism of France's military leaders, it then began to lag behind. As long as the Red Army had not yet mastered the technique of the modern air arm, and as long as Germany remained disarmed, the superiority of the French Air Force was undisputed, but the situation changed rapidly when the great air armament race began, and in 1932–33 France was no longer mistress of the air. The weaknesses of the French Air Force, previously unseen owing to the backwardness of other air arms, now began to show themselves very clearly. The French Air Force failed to keep abreast of technical development, and its fighting value and its numerical strength remained more or less stationary for years. France took no part in the great revolution in air strategy in the years 1930–32, when both the Soviet Union and Italy stressed the importance of the air arm. The French air arm was still regarded as a mere supplement to the land forces, without any independent strategic tasks, as a useful instrument for maintaining connections, and for reconnoitring, and as a means of supplementing the effect of artillery action. As a military critic declared at the time, its role was considered to be that of "a discreet observer and mediocre artillerist". The technical performance of the French air arm up to 1934 was utterly inadequate: between 125 and 190 miles an hour for fighters, between 100 and 120 miles an hour for bombers, and an average bomb load of less than half a ton. French strategy had no chance of tackling the problem of air supremacy in the modern sense of the term with a weapon whose performances did not greatly exceed those achieved during the World War.

Referring to this critical period Pierre Cot writes:

> "The opinion that France occupies first place in the air is an exaggerated one. Up to 1933 our General Staff interested itself in the air arm purely as an instrument of co-operation."

Faced with an enemy like National Socialist Germany, which attaches paramount importance to air warfare and the establishment of air supremacy, any weakness of the French air arm would mean a serious threat to France from the air, and would, in fact, endanger her whole national security. There is no Maginot Line in the air, and it is in the air that France is most vulnerable and can be most easily threatened.

The reconstruction of the French Air Force was carried out in two stages. The first stage was concluded in 1936, and the second began in 1937. The first stage brought considerable progress in air organisation, in the doctrine of air warfare, and in the construction of modern prototypes. The first measure was put into operation on April 1st, 1933, the creation of an independent air army, thus laying the absolutely necessary organisational basis for a new air strategy of offence, and in the summer of 1934 General Debeney declared: "We've enough concrete; now let us spread our wings". In the years 1935–36 France created an air force of almost 1,200 first-line machines, i.e., of modern machines organised to take the air at a moment's notice, and this force was then more or less abreast of modern technical developments. Seven hundred of these machines were bombers or all-purpose fighting machines (*multiplace de combat*), and the others were chasers and scouts. At this time the average speeds of the chaser and scout machines lay between 180 and 250 miles an hour, and the average speeds of the bombers between 170 and 200 miles an hour, whilst the average bomb load had been increased to 1 ton. The French Army thus at last had a weapon for launching an air offensive: in 1936 the *Division de la Garde Aérienne* was formed, i.e., a highly-trained nucleus of an air shock army equipped with all offensive air weapons, including transport machines for air expedition corps of infantry and tanks. Parallel with this technical progress the French air arm developed an active and offensive strategy in accordance with the axiom of the former Air Minister, General Denain: "A surprise attack will be answered with a surprise attack, a bomb with a bomb". The former Commander-in-Chief of the French Air Force, General Fequant, writes as follows:

> "The task of our air force will not be limited to defending our country from air attack. It already has sufficiently powerful weapons to give it the upper hand in the event of a conflict, and by its offensive operations it will break the will of the enemy and pursue him to the very sources of his power. Our air squadrons will strike far behind the enemy lines and attack the material sources indispensable for the supply and continued existence of his armies. And further, when it has weakened the enemy by such attacks, it will be in a position, thanks to the wide radius of action and high speed of its machines, to assemble its forces from all sectors of the front and to concentrate its fighting strength at the critical moment on any one point of the front and thus effect a break-through for the land forces."[1]

In the second half of 1936 a reform was carried out in French air organisation which greatly increased the mobility and preparedness of the air arm.

The development of the French air arm in 1937–38 was marked by a number of setbacks, but at the same time by quite considerable technical progress. The potential capacity of the French aero-industry is very considerable. In the years 1917–18 it turned out 33,000 planes and 55,000 aero-engines. According to the calculations of a Soviet air expert,[2] the French aero-industry would be in a position to turn out up to 25,000 planes and 40,000 aero-engines in the first year of a future war, and experience during the World War indicates that these figures are not exaggerated. However, in recent years the productive capacities of the French aero-industry have not been sufficiently utilised even within the framework of ordinary peace-time production. In 1937 the aero-industry employed only 40,000 men, as compared with approximately 60,000 men each by the British and Italian aero-industries, about 120,000 men in the German aero-industry, and about 250,000 men in the Soviet aero-industry. According to Pierre Cot, France produced 785 military planes in 1935, and 890 in 1936. According to "*L'Œuvre*" of April 20th, 1938, however, production fell as low as 500 in 1937. Thus there is no question of real mass production concentrated in a few very big factories on a few first-class types. France has about 30 aeroplane factories producing many different types in small numbers. In comparison with the German and Soviet aero-industries therefore the French aero-industry is both small and backward. Even in October 1938 Paul Rives, the official reporter on Air Estimates in the French Chamber of Deputies, declared that the French aero-industry was still being conducted more like a handicraft than a modern large-scale industry. Including prototypes, the French Air Force, which is only of medium numerical strength, has about 15 different types of fighters, and approximately the same number of medium and light bomber types.

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[1] General Fequant in "*Vu*", November 14th, 1936, p. 15.

[2] In "*Voina i Revolutsia*", July–August 1935, p. 128.

Unfortunately, too, the process of re-equipment is very slow. The cycle of production from the prototype to the introduction of the standard model takes several years in France, whereas in Germany and the Soviet Union it has been cut down to between a year and 18 months, and General Armengaud writes:

> "We are in danger of losing ground because we take more time for the completion of our prototypes and the subsequent production of the standard machines than the others do. Our newest types of machine are still in construction, but the others already have theirs in service."[1]

Generally speaking the prototypes of 1934 were still being produced in France in 1937, whereas Germany, the Soviet Union and Great Britain were producing the prototypes of 1936. The result of this is that there is a certain lag in France both in effectives and in quality, although in 1934–38 excellent prototypes were being constructed. This is a very important point: French aero-technique is on a very high level, and potentially the problem of quality has been solved. France has at least seven prototypes and standard types of fighting planes, all of them capable of very high speeds (between 260 and 300 miles an hour): Bloch 150, Morane 405, Loire 250, Caudron-Renault "Cyclone", Devoitine 513, and Mureau 490. In the Spanish civil war the French fighting plane equipped with the automatic cannon has demonstrated very high technical and fighting qualities. France also has a series of prototypes and standard types of modern light and medium bombers, for instance, the Potez 63, Bloch 131, Hanriot 220, Bréguet 420, Léo 45, Loire 45, and Bréguet 690, and, above all, the medium bombers Amiot 340 and Amiot 370, which are amongst the best in the world. At the Paris Air Exhibition in November–December 1938 further high-quality prototypes were shown. including the Devoitine fighter 520 C-I, and the Loire-Nieuport fighter CAO 200, each with a speed of over 300 miles an hour, the fast four-engined bombers Bloch 135 B-4 and Hanriot Centre 223, and the super-fast bomber B-4 Centre 150, and a number of fast modern reconnaissance machines. In 1937 a beginning was made with the re-equipment of the French air arm with the most up-to-date flying material, including the Morane 406 fighter, and the light bomber Potez 63, which are now being produced on a mass scale.

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[1] General Armengaud in "*L'Europe Nouvelle*", April 9th, 1938.

However, the problem of quantity, the actual existing strength of the French air arm, as distinct from the productive capacity of the French aero-industry, has not yet been solved, particularly in comparison with the development of the air forces of Germany and the Soviet Union, and the norms and aims of the air armaments of these two countries. Despite the strengthening of the French Air Force in recent years its relative strength in European affairs has declined.

A very important question now arises: to what extent will the French air arm in 1939–40 be the weapon French air strategy needs in the event of war? Is there a danger that a further disproportion may arise, this time between the numerical and material demands of strategy and the actual strength of the air arm at the opening of hostilities? According to the statement of Pierre Cot, the capacities of the French bombing squadrons increased by no less than 400% in the years 1936–37. This big increase was obtained in part by increasing the production of bombers, but above all by transferring a number of scout squadrons with their personnel to the bombing squadrons. It must be borne in mind that before this increase of strength France's bombing squadrons were relatively neglected. In 1935–36 there were only a few heavy bombers: a few dozen bombers of the Farman 221 type having a bomb load of between 2 and 3 tons. We may assume that after 1938–39 developments (Guy la Chambre's programme provides for a production of approximately 2,600 military planes in this period) the French Air Force will have a total bomb load of about 1,500 tons in 1940. This represents quite a formidable fighting strength, particularly when compared with the capacities of the European air forces in the years 1930–34. On the other hand, it appears less formidable when one takes into consideration the great variety of objectives the air force will have in the event of war. In other words, the French Air Force has very definite limitations, and as a weapon of offence, as an instrument of reprisals, its efficiency is still relatively limited. Its fighting value can be increased only if the French air-building programme is considerably extended.

The defensive possibilities of the French Air Force are also limited. The French Press reports that the first-line fighting squadrons have between 300 and 400 machines, but at the same time it assumes that in the event of a sudden air attack on France by National Socialist Germany, between 1,500 and 2,000 bombers could be used. A demand has therefore been put forward that the fighting machines of the French Air Force should be trebled in numbers. Now that there is a military alliance between Germany and Italy there is also a possibility of a combined air war of these two powers on France. Using all its offensive resources such an Italo-German coalition could put up to 3,000 bombers into the air against France. It is clear, therefore, that the dangers to France in the air have greatly increased.

4. MOTORISATION AND THE TANK CORPS

The offensive power of a modern land army is, generally speaking, determined by the power of its motorised weapons. The motorised arm of the French Army is facing more or less the same problems as its air force. According to German sources the French Army had about 3,000 tanks in 1934–35. In 1938 it had the following motorised units:

A Light Mechanised Division: two regiments of tanks, one regiment of *dragons portés* [1] on cross-country vehicles, and motorised artillery.

Seven Divisions of partially motorised infantry, whereby the artillery and all its attached effectives (engineers, signals, etc.) and the transport section are motorised. The infantry can be transported on lorries.

Motorised units in three normal Cavalry Divisions: armoured cars, motor-cycle skirmishers, *dragons portés.*

About ten tank regiments at the disposal of the Supreme Command.

Further, about 40% of the artillery is motorised, including almost all the heavy artillery.

French achievements in the matter of army motorisation are considerable, and the former Commander of the moto-mechanised units of the Red Army, Chalepski,[2] declares: "France has made a gigantic effort in order to have the greatest possible number of vehicles of all kinds at her command in the event of war". The French Army now has a special motor-transport service with units attached to the Divisional Commands and other organisational formations. Special motor-transport columns are ready to carry troops of all arms according to need. Motorisation in the French Army is spread out rather than concentrated, but if it wished to concentrate its motorisation effectives the Supreme Command could set up new moto-mechanised units in addition to those already in existence. They could be formed by attaching tank squadrons and motor-transport columns to infantry units, and providing them with the already motorised artillery batteries.

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[1] *Dragons portés* are motorised cavalry. Tr.

[2] Chapelski in the "Bolshevist", July 15th, 1935, p. 60.

Two features are characteristic of the uses of motorisation in the French Army:

Tanks are intended primarily as a supplementary weapon to infantry units, or as a German military publication puts it, "as armoured artillery advancing at infantry pace".[1] And a French tank expert declares that the French tactical conception of tank action is that tanks should be sent forward in the van of an attack in co-operation with the infantry, i.e., not that they should develop to the full their great mobility and wide radius of action, as they would have to do if they were used independently.[2] This explains the significance of the heavy tanks. France was the first country in Europe to introduce super-heavy tanks (weighing between 70 and 90 tons).

Further: the high degree of army motorisation in France is regarded as a technical means of obtaining the greatest possible mobility and ensuring the greatest possible capacity to manœuvre. Motorisation is intended to solve the transport problem of rapidly-moving troops, i.e., mobile infantry and motorised cavalry. This is the conception of the authoritative theoreticians of French army motorisation, General Camon and General Culmann. Just as the tank has not been developed primarily for high speed, so the motorised troops of the French Army have been developed and equipped rather for mobility than for the greatest possible offensive and break-through power.

The weak points of French army motorisation and mechanisation lie partly on the field of technique proper. A considerable part of the French tank park consisted of old Renault tanks from the days of the World War modernised at a later date. According to German sources[3] even half the total tank park of the French Army in 1934 consisted of these old models, and General Brecard complains in

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[1] "*Deutsche Wehr*", Supplement "*Truppendienst*", May 28th, 1936, p. 360.

[2] In the "*Revue Militaire Française*", July 1936.

[3] Lieutenant-Colonel Nehring, "*Kampfwagen an die Front!*", Potsdam 1934, pp. 41–2.

"*L'Echo de Paris*": "We have not enough powerful fast tanks: we have lost a lot of time". And Paul Reynaud, the parliamentary champion of the modernisation of the French Army, says the same thing. Writing in 1936 about the only Light Mechanised Division existing at the time he declares:

> "There is no doubt about the usefulness of this Division, but its effectiveness cannot be compared in any respect with that of the enormously powerful German Armoured Divisions. It is true that we too have begun to build modern tanks, but we are still very backward in the matter of quantity. And further, we have not yet decided definitely how they are to be used in the field."[1]

Paul Reynaud touches on another weakness of France's army motorisation here: the insufficient striking power and offensive capacity of the motorised units. These French weaknesses in the theory and practice of motorisation are openly pointed out and criticised in German military publications, probably not without a certain satisfaction. They speak of the diffusion of forces and of the insufficient fighting power of the French mobile units:

> "Speed without fighting power is useless; every movement ends in battle, and it is then that the fruits of speed must be plucked. What is to be done if the enemy bars the way to the desired objective and the fighting force of the mobile units is insufficient to break a way through?"[2]

Even in 1938 the French Army had no regularly organised moto-mechanised shock army such as both the German Army and the Red Army possess for offensive purposes. A French military expert writes as follows in an article on the use of mechanised forces by modern European armies:

> "It would appear that France has no intention at the moment of using tanks in masses against enemy concentrations as the Germans plan to do."[3]

In the view of French strategy the mechanised and motorised units will first of all have a defensive task to perform; they represent the nucleus of a covering force, and not the nucleus of a shock army intended for offensive operations. Even a military leader like General Weygand shares this view, though otherwise he rejects any fundamental limitation of French Army activity to the defensive and demands the training of the army for offensive operations. Even in his view the moto-mechanised units have the following strategic function:

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[1] In the "*Paris-Soir*", September 5th, 1936.

[2] "*Deutsche Wehr*", October 24th, 1936, pp. 685–6.

[3] In "*L'Illustration*", March 28th, 1936, p. 367.

> "Acting in touch with our fortifications the mobile reserve of our covering forces will have to utilise the full speed of its armoured weapons at threatened points to fill up breaches, and, with their light units, neutralise the effect of attacks on our rear communications."[1]

The defensive destiny of the tank arm and the motorised units is clearly visible in this description: they are to be used in defensive manœuvres. So far the idea of creating offensive tank units has been approached only very gingerly, and General Debeney proposes the formation of one powerful Armoured Division, although at the end of 1938 Germany already had four such Divisions.

However, there is no doubt that the year 1936 saw a certain change both in the technique and strategy of the French Army, and that this change lay in the direction of forming such a moto-mechanised shock army. An idea analogous to the German and Soviet conceptions of the special organisation and brigading of armoured troops for offensive purposes has obviously won the upper hand. French Tactical Instructions issued in August 1936 concerning the use of big units provides for tank groups intended for long-range and relatively independent action, "*chars de manœuvre d'ensemble*".[2] It is gradually being generally recognised, even in France, that the tank is specifically an offensive weapon, and that a modern army urgently needs a moto-mechanised shock group.

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[1] In the "*Revue des Deux Mondes*", October 15th, 1936, p. 726.

[2] However, it must be pointed out at this juncture that in the opinion of Soviet military experts French tank tactics are still rather conservative, and the famous tank expert General Eimannsberger goes still further in his criticisms: "In my opinion the French Tactical Instructions of 1936 treat modern armoured weapons as though they were still in their technical infancy. . . . The armoured unit tactics as laid down in this document represents a gigantic misunderstanding." In the "*Militar-Wochenblatt*", May 28th, 1937.

The "*Petit Parisien*" wrote as follows after the big autumn manœuvres in 1936:

> "A break-through can be obtained only as the result of combined action between the tanks and the artillery. . . . We need a number of Armoured Divisions."

As early as 1934–35 two prominent military writers, Lieutenant-Colonel Gaulle and General Allehaut, demanded the formation of a motorised shock army consisting of six or seven Armoured Divisions to be the instrument of an offensive strategy, though their technical proposals differed. The decisions of the French Ministerial Council, which took place in the autumn of 1936 and voted a further 14 milliard francs as supplementary credits for the modernisation and re-equipment of the army, expressly mentioned the necessity for strengthening and numerically increasing the tank arm, and for the formation of a corps of specialists consisting of professional soldiers.

Both together—arms and personnel—indicate that big moto-mechanised units are now to be set up in the French Army for the purpose of conducting independent offensive operations. At the beginning of 1937 steps were taken to form two new Light Mechanised Divisions. Speaking in the Chamber of Deputies Daladier recognised the necessity of creating Heavy Armoured Divisions. The new French tank, the 11-ton Renault with heavy armour, has already demonstrated its high fighting capacities. During the manœuvres in 1937 in Normandy an experiment was made for the first time with the assembly of the elements of an Armoured Division.

The question of the formation of a motorised shock army now seems to have been solved in the affirmative for France too. All that remains to be settled is the question of its strength and the speed at which it is formed.

5. THE STRATEGIC POSITION OF FRANCE

French strategy is determined by the extraordinarily strong defensive position of the country, which explains both the construction of the French war-time army (the conception of the *nation armée* and its slow rate of mobilisation behind the line of fortifications) and the function of the standing army as a covering force acting along the fortifications to repulse the first hostile blow and enable the mobilisation of the mass army to take place without interruption. This opening position also determines the tactics of the French General Staff: the manœuvring with mobile troops behind defensive lines with a view to giving the first defensive action a chance of surprise and initiative. The French belt of fortifications stands out as one of the decisive strategic factors in the whole locational position of European military forces. Its importance was confirmed during the World War, when the German wave of attack broke against it; not only in 1916 at the siege of Verdun, but long before during the first big German offensive and the dramatic encounters on the Western front in 1914. All sectors of the line of fortifications between Belfort and Verdun fulfilled their strategic mission in 1914. Belfort guarded the entrance to Burgundy and acted first as the outlet to the French Alsace army in its offensive, and afterwards as its refuge; the offensive of the VI German Army broke down against the defensive line Nancy–Epinal. And even in the beginning, whilst the Germans were still advancing on Paris, Verdun acted as a powerful breakwater, splitting the German front and holding up the German flank. As a result the German front line in the West developed the big salient form which proved so embarrassing throughout the whole of the campaign and hampered all further German offensives whilst at the same time giving the Allied forces a wide freedom of strategic movement. Both German and French military experts now unanimously recognise the decisive importance of the Verdun position.

Commandant Montigny writes:

> "During the retreat in August 1914 and up to September 3rd, Verdun served as the strategic *point d'appui* of our army. During the Battle of the Marne the curtain on the Meuse protected the communications of the right wing of our forces and spared them the necessity of a general retreat."[1]

General Klingbeil, one of the foremost German authorities on military fortification, shares this opinion, and he writes as follows:

> "During the Battle of the Marne the two fortresses, lying on the flanks of the gigantic battlefield, Paris and Verdun, took on decisive importance, the one indirectly, the other directly. Verdun noticeably neutralised the pressure which the V Army was supposed to exert in the rear of the French Mosel front."[2]

And later he wrote as follows concerning the total strategic importance of the French fortified belt:

> "Above all it permitted the French to withdraw considerable forces from the right wing of their army, and, thanks to their highly-developed railway system, use them at the decisive points, whilst on the other hand it held strong German forces immobile and prevented them from taking part in the main battle."[3]

An attacking German Army to-day would be faced with the same tasks and difficulties, except that since the World War the French system of fortifications has been extended, deepened and perfected technically to an enormous extent. We can even go so far as to say that technical progress in the art of military fortification has been even greater than the increase in the effectiveness of modern weapons of attack. The bomber can do very little against modern deep-lying defensive works, and even the tank itself is not very effective.

The German "*Militär-Wochenblatt*" wrote on October 28th, 1938:

> "The Maginot Line with its multiple rows of armoured forts, impassable zones and marshlands, equipped with the last word in modern science, cannot be taken by surprise."

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[1] In the "*Revue Militaire Française*", December 1935, p. 278.
[2] In the "*Militar-Wochenblatt*", January 4th, 1936.
[3] Ibid., July 4th, 1936.

The fortification question has thus a double aspect: a technical and a strategical. Sediakin, formerly Adjutant to the Chief of the Red General Staff, who inspected the Maginot Line in the autumn of 1935 in his capacity as leader of the Soviet Military Mission to France, has given us valuable information concerning the technical aspect:

> "Throughout the fortified zone we saw the most modern and powerful weapons. They must necessarily give maximum results, not alone in the defence of the country against attack, but when the fortified zone is used as a point of departure, as a *point d'appui* for counter-attacks undertaken as reprisals against a possible aggressor. The system of fortifications has been admirably thought out, organised and executed. I came to the conclusion that a system of fortifications of this sort must render the defended district impregnable in the present stage of military technique."

Sediakin then deals with the problem from its strategical aspect:

> "Naturally, this conclusion presupposes two things: first of all that the troops stationed in the fortified zone show sufficient watchfulness and do not let themselves be taken by surprise, and secondly that in the event of enemy attack they show the necessary resistance and tenacity."

And in conclusion he adds:

> "The importance of these great defensive works is increased still further by an impressive network of railways, built with great ingenuity to ensure the greatest possible freedom of movement and manœuvre in the inner fortified zone."[1]

It is, thus, not merely a question of the art of fortification alone, but of the connections between the fortified lines and the main base of operations, with the front of the army as a whole and with the rear. This is also the view of French strategy. It realises that Verdun was able to hold out in 1916 thanks to its connections with the front line and thanks to the tenacious resistance of numerous, well-trained and frequently relieved troops. French strategy reckons with a tremendous effort on the part of an enemy concentrating all his resources on a chosen sector of the line, using his most powerful

[1] All three quotations in the "*Isvestia*", September 2nd, 1935.

weapons of offence, including perhaps previously unknown weapons, using his élite troops, and being in possession of full knowledge concerning the organisation and positions of the attacked sector. French strategy also utters a warning against excessive trust in isolated defensive works, and General Allehaut declares:

> "We should be deceiving the country if we said that defensive works were in a position to guarantee complete security."[1]

The French doctrine of the organisation and strategic utilisation of defensive works is based on the lessons of the World War. It has become of tremendous significance and it determines the use of unique and massive defence complexes. Isolation is avoided at all costs. Fortresses in the old sense of the term no longer exist. Here we are dealing with fortified districts extended into fortified fronts. The permanent fortifications represent the backbone of the defensive works, and throughout their whole length they are closely connected witht he rear and with the army in the field, having powerful flanks based on natural or artificially created obstacles of great depth. This great belt of fortified districts will permit France to carry out her mobilisation, and at the same time it will give the military leadership tactical freedom of movement and the choice of time and place for a decisive counter-blow. The military leadership will profit from a far-reaching economy of forces and be in a position to carry out the most suitable concentration of its forces. The fortified districts can receive a retreating army and become an impregnable wall of defence. They can divide and split up a hostile army attacking along the whole front. And finally they can become the decisive theatre of war when the military leadership has collected its forces under their protection and is ready to lead them out against the enemy. This doctrine, prepared for all eventualities, indicates the strategic possibilities of France in a future war.

The army reform which has been in progress since 1936 will also perfect the French system of fortifications, and extend it. Not only the Southern sector and the centre of the Western front during the World War, but also the Northern sector is now to be fortified. The defensive works which stretch from Valenciennes to Maubeuge are to be extended. At the same time "The Basle Gap" in the South is to be filled up and the line of fortifications along the Jura Mountains strengthened. To use the words of Guy la Chambre, formerly Chairman of the Military Committee of the French Chamber of Deputies, France will soon be in a position to let down the last portcullis at the last drawbridge. The defensive works in Northern France will hardly be of the same magnitude as the Maginot Line proper, but the combination of the defensive works in Northern France and those in Belgium will have a greater depth than the line of defensive works which run from Longwy to Lauterburg. The many-breasted defensive line in the North, which runs, with interruptions, from Liége to Dunkirk and from Antwerp to Verdun, can become a death-trap at numerous narrow points of irruption for an attacking German Army, and at the same time it gives the French forces wide possibilities for manœuvring. The line of offensive laid down in the Schlieffen Plan is now doubly endangered for National Socialist Germany: by the network of Franco-Belgian defences, and by the close attention which a manœuvring French strategy will pay to this line. The defensive position of France is becoming more and more perfected.

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[1] General Allehaut, "*Etre Prêt!*", Paris 1935, p. 218.

6. THE SPIRIT OF FRENCH STRATEGY

French strategy proceeds in a thoroughly realistic fashion from the given facts of France's military situation: the structure of the French Army and the defensive position of the country. At the moment French strategy is undoubtedly the most methodical, the most cautious and the most cool-headed in Europe. It would be fundamentally wrong to accuse French strategy of sabre-rattling, but it is certainly not one-sidedly defensive. It is the only war doctrine which formulates the problem of a mobile-defensive prosecution of the war with the perspective of adopting the offensive.

The decisive feature of French strategy is the care with which it provides for all eventualities. General Foch's old axiom is still law:

> "Only where there is a carefully calculated combination of attack and defence can any offensive action develop at the decisive point."

And General Loizeau declares:

> "In the first months of the war the strategic manœuvring of all units demands a combination of offensive and defensive battle operations."

The theory of offensive at any price, which determined the first operations of the French Army in 1914 and was later condemned as adventurous by Marshal Pétain, has been abandoned. Referring to the early days of the war, Marshal Pétain has declared that the French Army rushed to the frontiers with more confidence in its élan than in its equipment. According to the declarations of the Minister for War, Daladier, before the Military Committee of the Chamber of Deputies, it is clear that the French Army will begin the next war with a defensive battle on the frontiers, utilising all the advantages of a strong defensive position. Guy la Chambre says the same:

> "At the beginning of the conflict and as far as land operations are concerned there can be no question of anything but prosecuting the war definitely on the defensive."

However, this manner of prosecuting the war is intended only for its first stages, and even then it is envisaged in the form of a war of movement with the intention of preparing for an offensive at a later stage. The organ of the Soviet Commissariat for Defence writes:

> "According to the French view the enemy invasion is to be brought to a standstill and then developed into the complete defeat of the enemy forces."

This operation is to be carried out by rapid manœuvring. The development of motorisation and the setting up of mobile units are to give the French Army this manœuvring possibility and provide it with a technical basis.

General Allehaut writes:

> "The mechanisation of our fighting forces on the one hand and more or less wide-scale motorisation on the other lead necessarily, thanks to the strategic and technical mobility they produce, to a resuscitation of the manœuvring spirit. We now observe that the mechanised formations are developing the idea of movement, which in its turn tends towards the idea of surprise attack."[1]

The defensive is only a preliminary stage of the offensive: the second stage of the war is to be an offensive. Guy la Chambre says this very definitely:

> "Behind the bulwark on which more than half our active army keeps watch day and night, the armed people of France must be organised for the decisive action: the battle which must bring victory."

Will the offensive resources of the French Army prove sufficient for this task?

7. COULD FRANCE LAUNCH AN OFFENSIVE?

The answer to this question is as important to Europe as it is to France herself. For France the problem is to provide her army in good time with modern weapons of offence in sufficient numbers to create the military technical instrument necessary for the delivery of a powerful counter-blow. Her air arm and her moto-mechanised shock army must be able to stand comparison with the powerful offensive weapons of National Socialist Germany. If France cannot solve this problem in time, then French strategy will have no alternative but to confine itself to defensive manœuvres. There are French military experts who reproach the French Army with being no more than the garrison of a beleaguered fortress. The two main weapons of offensive strategy in modern warfare are the air arm and the concentrated moto-mechanised arm. The state of these arms will determine the relative strength of the French Army in Europe. Just as the defensive works of France defend not only French territory but the whole of Western Europe against a German invasion, so a French shock army will represent the only offensive weapon in the hands of Western Europe against National Socialist Germany. Its only supplementary assistance can come from the British Air Force. The role of France in a European defensive coalition will therefore depend also on the strength of her weapons of offence. André Pirroneau has pointed out with some truth that unless the French Army is provided with powerful weapons of offence, French military undertakings in Europe must remain decorative flourishes. Is National Socialist Germany to have a monopoly of modern weapons of offence in Western Europe? And is the Soviet Union to have the same monopoly within a defensive coalition? Or will France, as the third strongest military power in Europe, now provide herself with the means of developing her own independent offensive strategy in the event of her being called upon to repulse a German invasion? The European significance of a successful strategy of offensive on the part of France would be tremendous.

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[1] General Allehaut, "*Etre Prêt!*", Paris 1935, p. 196.

Lieutenant-Colonel de Gaulle enumerates the political-strategic arguments in favour of his plan of creating a moto-mechanised shock army, and writes:

> "If we reach the Danube and Swabia we shall be able to prevent the *Anschluss*. If we drive forward towards the Rhine Czechoslovakia will receive new strength. If we occupy Tréves (Trier) and the Eifel district we shall simultaneously cover Lorraine, Belgium and Luxemburg. Whoever controls Dusseldorf can paralyse all work in the Ruhr district."

French strategy failed to use the possibilities which presented themselves to make the Austro-German *Anschluss* impossible and to defend Czechoslovakia, but de Gaulle's main point still remains: The mass use of modern military technique is the primary condition for any offensive strategy.

CHAPTER IX

THE CONSEQUENCES OF BRITISH REARMAMENT

I. BRITISH ARMAMENT METHODS

GREAT BRITAIN'S MILITARY weakness, which hampered the potential strength of any European collective security-block so badly in 1935–36, was not to be the permanent condition of the biggest empire in the world. The British rearmament programme was announced in the Government White Books of March 1936, February 1937 and March 1938. It is a programme of large-scale and systematic rearmament backed by the political authority and the enormous economic resources of Great Britain. The announcement was made in a very effective fashion both psychologically and politically. An objective judgement on the methods, aims and limitations of British armaments is one of the most important politico-military requirements of the moment.

From now on the economic resources of the British Empire must be calculated in the international armament race. The total sum of 1,500 million pounds sterling which it is proposed to spend on armaments during the next five years does not in itself give us an exact picture of the British military strength aimed at; we must know how it is to be apportioned. The most obvious factor in the present politico-military state of Great Britain is the disproportion between her weak effectives and her powerful economic war potential. This disproportion is not being liquidated uniformly. The British armament programme varies very considerably as between arm and arm. From this differentiation we can see where the main weight of the planned strengthening is to be laid, and what strategic intentions are to be attached to the various arms.

First of all Great Britain must extend her war industries and develop her industrial strength into war potential. In this respect she has lagged farther behind than any other big power in Europe. The shipbuilding industry can—and will—be mobilised rapidly and effectively, and then follows, as far as concentration and intensity are concerned, the aero-industry. The industries working to supply the land forces take third place only. From this we may draw our conclusions concerning the intentions of British strategy.

The procedure itself has been laid down more or less in detail in the White Book of March 1936. We can read there that the British Government was faced with two methods of operation: it could either amass enormous supplies of war materials, or carry out a precautionary reorganisation of industry in order to have war industries ready to function at once in case of an emergency. It chose the second method, i.e., the systematic development of the war industries. A German military publication writes as follows concerning British preparations:

> "The so-called industrial mobilisation of Great Britain has begun. The Government wishes suitable undertakings, such as engineering works, automobile works, chemical works, etc., to erect supplementary plants in which the production of war materials could begin at a moment's notice. In peace-time such plants would be used only to train both workers and engineers in their war-time tasks. The British Government wishes to create a reserve armament industry capable of switching over from peace-time to war-time production at a word."[1]

However, this very effective form of industrial mobilisation represents only one part of the total economic war policy of Great Britain, which is complete in extent and world-embracing in aspect. It is a far-sighted policy, thinking in terms of whole continents. Great Britain's economic war basis is the world market, and she guarantees the whole of Western Europe the maintenance of its connections with the world economic system. Great Britain is organising her supplies of food and raw materials for the event of war. Australia is to become an arsenal for the Pacific, and Canada is to have a first-class aero-industry. Great Britain has given the Anglo-French Entente a definite programme for the joint use of its economic resources. This programme was drawn up, for the moment in broad outline only, during the London negotiations of April 28th and 29th, 1938. At the same time Great Britain has approached the U.S.A., and the latter's highly-developed war industries are to begin by supplying aeroplanes.

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[1] "*Deutsche Wehr*", May 28th, 1936.

2. BRITISH NAVAL ARMAMENTS AND NAVAL STRATEGY

The world to-day is confronted with two main military problems: the military problem whose chief factors are Germany, the Soviet Union and France, and the strategic problem of vital sea communications, whose chief factors are Great Britain, Italy, Japan and possibly the U.S.A. Great Britain, Italy, and the U.S.A., and in a certain sense Japan too, are only supplementary, flanking, powers in the first case, whilst in the second case this role is played by the great continental military powers, Germany, France and the Soviet Union.

The relation of forces between the big naval powers to-day is very different in many respects from what it was in 1914. Great Britain no longer has absolute command of the seas. In the meantime Japan and the U.S.A. have developed into formidable sea powers. Germany is no longer a first-class naval power, but Italy has embarked on an active maritime policy. At the moment Great Britain has only 15 battleships as compared with 69 in 1914, and only 57 cruisers as compared with 108. However, the relative strength of the British Navy has not decreased to the same extent, because the German Navy has decreased even more. On the other hand, the British Admiralty is faced with far more formidable strategical tasks to-day.

The lowest ebb of British sea power was reached in 1934–35: the Grand Fleet was weak, partly obsolete and not ready for immediate action; its air arm was small and its naval bases were insufficiently developed. When Italy dared her big offensive against Great Britain's sea routes in 1935–36 the British Government shirked the issue, but Great Britain's present naval programme intends to put the British Navy once again in the forefront of the world navies, both in quality and quantity, and to guarantee the safety of Britain's sea communications. In 1937 5 battleships, 21 cruisers, 5 aircraft-carriers, 49 destroyers and 19 submarines were laid down. According to Hector Bywater, the Naval Correspondent of the "Daily Telegraph", after the completion of the present naval building programme, i.e. presumably in 1942, the British Navy will have 25 battleships, including 10 newly-built vessels, 70 cruisers, 9 big aircraft-carriers, 150 modern destroyers, and between 65 and 70 modern submarines. The White Book of March 3rd, 1938, declares that on January 1st, 1938, warships to a total tonnage of 547,000 were being built as compared with 376,000 tons on January 1st, 1937, 282,000 tons on January 1st, 1936, and 139,000 tons on January 1st, 1935. Great Britain's naval building programme thus aims at exceeding the combined programmes of her three possible enemies: Japan, Italy and Germany. Above all Great Britain wishes to retain the lead in the building of battleships, cruisers and aircraft-carriers. British warships built in 1937–41 will have a greater tonnage than that of the entire Italian Navy. Great Britain has a double advantage over all her possible naval enemies: almost unlimited financial resources and an enormous shipbuilding capacity, a capacity which is only 55% utilised even after the big building programme of 1937. At the beginning of 1937, when he was still First Lord of the Admiralty, Sir Samuel Hoare declared:

> "We are still in a position to build better and more powerful ships, and to build them more quickly, than other countries."

Part of the British naval armaments programme provides for the modernisation of a considerable section of the navy, and for the development of Britain's naval bases.

However, the strategic naval situation of Great Britain to-day is different from that which existed in 1914. Great Britain's fight to keep open her seaways and maintain command of the sea has become more complicated, and, in addition, it has to be conducted over incomparably greater distances. It is true that the danger in the North Sea has become very considerably less owing to the practical disappearance of the German High Seas Fleet, but on the other hand Great Britain's seaways are seriously threatened in the Mediterranean by Italy and in the Pacific by Japan. Great Britain's strategic situation at sea varies considerably in accordance with the zones of possible naval conflict. The revival of British naval strength would give a European collective security block an absolute superiority in European and African waters. In this sense Britain's naval armament programme is of decisive strategic importance, but at the same time Great Britain is far more dependent on the assistance of allies in all those seas where naval conflicts are possible in a future war than she was in 1914–18.

The situation in the North Sea is, comparatively speaking, the most straightforward and the most favourable. The Home Fleet can easily be kept at a strength superior to that of the newly-created German Navy, though the British Admiralty has to take into consideration the fact that the modern vessels of the German Navy are superior in fighting value to the majority of British vessels of the same class. In the event of Great Britain having to station the greater part of her navy in the Mediterranean, as was the case in 1935–36 when big naval reinforcements were sent there, the remainder of the British Navy would be able to proceed actively against the new navy of National Socialist Germany only in the event of active seconding by the navies of France and the Soviet Union. The aggressive naval policy now being pursued by both Germany and Italy also compels France to increase the strength of her navy and to do it rapidly. It would seem out of the question that during the next few years France will be able to build up to naval parity with Germany and Italy together. French naval arrangements for 1936 indicate the intention of the French naval authorities to concentrate the majority of their battleships in the Atlantic ports, i.e., against National Socialist Germany. The position of the British Home Fleet can be considerably strengthened in this way. British naval strategy is also favoured by the very strong defensive position of the Soviet Union in the Baltic, and this will be still more the case when the first modern battleships appear in the Soviet Baltic Fleet. However, even in the traditional zone of Great Britain's naval hegemony, in the North Sea, she is now compelled to rely on the assistance of allies.

If Great Britain is to maintain her predominance at sea against Italy she will have first of all to concentrate powerful units in the Mediterranean, and secondly to pursue an active policy of naval alliances. The relation of strength amongst the naval powers of to-day and the great importance of sea communications through the Mediterranean for the British Empire seem to predestine the Mediterranean zone as the central and decisive one for the British Admiralty. When the curtain rose on the prelude to the great Anglo-Italian struggle in the Mediterranean, the world could see the magnitude of the naval forces the British Admiralty was prepared to send in the event of war: the major portion of the British Navy, including its most modern and powerful battleships, steamed into the Mediterranean, and it is certain that most of the vessels now on the stocks are intended for Mediterranean service. If she is prepared to send the necessary forces Great Britain is in a position to establish her superiority in the Mediterranean in battleships and cruisers, and in the long run the fulfilment of her naval building programme will still further increase her advantage. At first, however, the completion of the "Vittorio Veneto" and the "Littorio", the most modern battleships in the world to date, will improve the position of Italy in the Mediterranean, and although the British naval forces which could be concentrated in the Mediterranean at need would probably be numerically superior to the Italian forces even before the completion of the British battleship and cruiser building programme, nevertheless British naval power suffers from a number of defects which seriously affect Great Britain's strategic position in the Mediterranean. The Italian Navy will have an advantage in lighter vessels, in destroyers and flotilla leaders, and also in submarines and aeroplanes. On the other hand, Italy has no aircraft-carriers at all, whereas Great Britain has seven in commission and five others on the stocks or planned, so that in this important weapon of aero-naval warfare the advantage is entirely on the side of Great Britain. With the exception of the Eastern coasts, however, Italy will have an advantage in favourably situated naval bases. For these reasons German military experts consider that there is more or less naval parity between Great Britain and Italy in the Mediterranean. However, this German hypothesis of naval parity is sound only in so far as Great Britain's position in the Mediterranean is considered as an isolated factor. The hypothesis is hopelessly out immediately one considers (in accordance with foreign political realities) the possibility of an Anglo-French naval entente, because France possesses in the Mediterranean just what Great Britain lacks: a powerful submarine fleet, a very powerful fleet of modern light craft, and, finally, favourably situated naval bases on the Western coasts and in the central Mediterranean areas. Joint action by Great Britain's battleships and cruisers and France's cruisers, light craft and submarines, joint action by the British and French naval air arms, and the joint use of the naval bases at the disposal of these two powers in the Mediterranean, would take Italy in a powerful pair of naval pincers, from the East and from the West, and spell disaster for Italian imperialism. With French naval support the British Mediterranean Fleet would be in a position to establish an effective blockade of Italy and at the same time practically destroy her colonial empire. Great Britain's sea power could cut off Italy from her East African colonies, and leave them and her colonial army to an uncertain fate, writes a German military organ frankly and realistically.[1] Whilst French naval assistance would guarantee naval supremacy to the British

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[1] "*Deutsche Wehr*", March 25th, 1937.

Mediterranean Fleet, this supremacy would guarantee France's colonial army an absolute superiority throughout the whole of North Africa. British naval strategy seems determined to pursue an offensive Mediterranean campaign in the event of war with Italy, and just for this reason the well-known British military expert, Captain Liddell Hart, proposes that in the event of such a war Great Britain should abandon the Mediterranean route for her maritime commerce and adopt the Cape route. He writes:

> "If the British Admiralty is prepared to abandon this route and divert all normal traffic by the Cape route, its forces in the Mediterranean may play an important strategic part. By the virtual closing of that sea as a traffic route it might be more effectively utilised as an area of offensive operations against an opponent who could not disencumber himself similarly."[1]

Spain represents one of the most important problems of British strategy in the Mediterranean. Generally speaking there is more or less a balance of power between the Western powers and the Axis powers in Europe, but this balance would be upset very definitely if the Axis powers succeeded in obtaining a really firm foothold in Spain, because such a base of operations would give them very dangerous possibilities of joint action; they could threaten both the Mediterranean and Atlantic seaways of the Western powers, and France would have to fortify her Pyrenean frontier, and in consequence her potential offensive power against Germany would be considerably weakened. In the event of a European war the first task of Entente strategy would undoubtedly be to crush hostile fascist forces in Spain immediately. This is also the opinion of Major Dupuy and Major Elliot, who write as follows in their book "If War Comes":

> "The time factor will take on capital importance, and one can formulate the question as follows: Could the Entente crush the fascist forces in Spain before irreparable damage was done to it elsewhere as a result of the absence of forces engaged in Spain?"[2]

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[1] Captain Liddell Hart, "Europe in Arms", Faber & Faber, London 1937, p. 114.

[2] E. Dupuy and G. Elliot, "*Si la guerre éclatait*", Editions Payot, Paris 1938, p. 311.

They suggest the following measures: a powerful land offensive across the Pyrenees, a naval blockade of Franco's harbours, British pressure on Portugal, and naval and air attacks coupled with landing operations on the Balearic and Canary Islands. The British Navy would, of course, play the decisive naval role here.

Great Britain's naval strategic situation in the Pacific is completely different. On the extreme verge of the British Empire, on the edge of the Indian Ocean and the Pacific, between Singapore and Australia, British strategy can envisage nothing but defensive operations. Any independent trial of strength with Japan is out of the question. Great Britain's China Squadron consists of 6 cruisers, 1 aircraft-carrier, 1 flotilla leader, 9 destroyers and 15 submarines. This squadron can be given some fighting value only if battleships are attached to it. It is certain that the British Admiralty plans to reinforce the China Squadron in this way, but that can be done only after the completion of the naval building programme, i.e., certainly not before 1940. The compulsion to seek alliances is stronger for Great Britain in the Far East than anywhere else. The naval situation there could be altered in favour of a defensive coalition only if the U.S.A. with her powerful battleships and her powerful sea air arm were to join it.

British naval armaments promise to strengthen the position of a European defensive coalition very considerably, but before the completion of her naval programme Great Britain's sea power in the Pacific, and also to a certain extent in the Mediterranean, is comparatively limited. The critical period of British sea power, and therefore of the British Empire as a whole, will lie between 1939 and 1941.

3. GREAT BRITAIN A STRONG AIR POWER?

Great Britain's air armaments will have considerable bearing on the relation of military forces in Europe. Great Britain intends her newly-created air power to be the active weapon of British military power, and its rapid increase in strength is intended to compensate to a certain extent the technical and strategic difficulties which have arisen in recent years for the British Navy. The well-known expert on British affairs, Augur, writes as follows:

> "In the past the British Navy could go everywhere as an instrument of British foreign policy. To-day that is no longer the case. If Great Britain's prestige is to be upheld, then in the future the air arm must be the instrument for this purpose."[1]

British air armaments have both a technical and a strategic side. Even in 1935 Soviet military experts placed the productive possibilities of the British aero-industry very high, and it was assumed that under favourable circumstances a maximum production of 60,000 planes a year could be reached, though only after a considerable preparatory period.[2] Within the framework of British armaments as a whole the re-equipment of the air arm has proceeded more quickly and more thoroughly than anything else, and it might almost be said that one jump was made from mediocrity and comparatively low fighting value to technically and militarily excellent types. In 1937 the British Air Force had a wide assortment of aeroplanes of very high quality, including fighter planes with a speed between 250 and 350 miles an hour: the Gloster-Gladiator and Spitfire fighters, the Hawker-Hurricane, and other types; light bombers with a speed between 220 and 280 miles: Fairey-Battle, Hawker-Henley and Bristol-Blenheim types; and long-distance bombers of the Vickers-Wellesley type, and big fighting planes of the Avro-Anson and Westland-Lysander types. Medium and heavy bombers are also built of the Armstrong-Whitworth and Handley-Page types. The experts of all countries freely recognise that the best products of the British aero-industry are amongst the best in Europe.

However, this rapid development of the British Air Force is not proceeding without friction. In the beginning a number of the prototypes were found wanting, and the production of aero-engines failed to keep pace with requirements. Later on, in the spring of 1938, criticism became public, and "The Times" and Winston Churchill both joined in pointing out the following defects: insufficient extension of productive capacity in comparison with existing possibilities, and an insufficient utilisation of existing productive capacity; slowness in the organisation of mass production; and insufficient cohesion between the various branches of production. Because of these defects the question was raised of bridging the critical interlude by purchasing war planes from the United States.

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[1] In the "*Figaro*", October 8th, 1936.

[2] In "*Voina i Revolutsia*", July–August 1935, p. 27.

Technical air progress has also caused a change in British air strategy. Formerly it concerned itself primarily with home defence, and the question of the so-called armed air districts received particularly close attention in Great Britain, but for a long time now the tendency has been to concentrate on the counter-offensive force rather than on the home-defence fighter. The renewal of the air arm has now brought with it combined tasks of air defence and air attack. Bombing planes will have a radius of action of not less than 1,000 miles, i.e., as far as Eastern Poland or Southern Italy, and British air armaments are intended to develop the air force into a decisive weapon of offence in a European war. The majority of aeroplanes in the British Air Force are bombers. At the beginning of 1938, 840 machines were bombers out of a total of 1,540. In July 1936 the air force was reorganised: bigger air formations, so-called Air Groups, were created, and the leadership of the force was centralised and its mobilisation speed increased.

British air armaments provide for the creation of a metropolitan air force of 1,750 first-line planes (with, of course, a powerful reserve), to be attained, according to Sir Kingsley Wood, by March 1939, and followed by a further increase of 2,370 planes. Between 5,000 and 6,000 planes are to be ordered in the near future.

As the situation develops these figures will no doubt be considerably increased; and according to the programme adopted in the second half of 1938 we may assume that by

1941 the strength of the British Air Force on home service will be between 3,000 and 4,000 first-line planes.

In the opinion of Soviet air experts [1] British air armaments suffer from the following weaknesses:

First of all, they do not seriously attempt to obtain air parity with the probable enemy, i.e., National Socialist Germany.

Secondly, British Air Force cadres are still numerically weak, and in 1938 there will be only 6,700 trained pilots in service.

And thirdly, the personnel of the air force will need some time before it can completely master the new technical resources which have been placed at its disposal so rapidly.

In a defensive war of the Western powers against the big fascist powers the renewed and strengthened British Air Force could more than double the air strength of France, and they would then have a combined air arm on a very high technical level. The British Air Force is to become the most powerful in Western Europe, and by 1939 it will have overtaken the air force of fascist Italy, and occupy third place amongst the air arms of Europe. Numerically the combined forces of an Anglo-French air entente still lag behind the combined air strength of an Italo-German coalition, and even the British air-armament programme will not ensure numerical air superiority to the Western powers.

4. THE LIMITATIONS OF THE BRITISH ARMY

During the World War Great Britain was the great strategic reserve of the Western coalition. Great Britain helped to win the war for the Allies not only by her decisive sea power, not only because of her leading economic and political position throughout the war, and not only by military operations on subordinate battle fronts (in the colonies and in Asia), but also by her activities as a great European military power. In Northern France British Divisions held on with extraordinary tenacity to that strategically important sector of the front which formed together with Verdun the two firm poles of the Western front as a whole, and every German offensive from 1914 to 1918 finally came to a standstill exhausted between these two poles. In 1916 the British Army on the Somme launched the first Allied offensive of the war. Referring to this battle the former First Lord of the Admiralty and former War Minister Duff-Cooper declares:

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[1] "*Kraznaya Svesda*", July 22nd, 1937.

> "Verdun was saved, the maintenance of Anglo-French co-operation was assured, the British were taught to fight, and the heart of the German Army was broken."[1]

The latest German history of the war [2] even declares that almost two-thirds of the entire German Army on the Western front had to be brought up to repulse the British mass offensives of 1917, and it describes British military strategy as careful and effective. On August 8th, 1918, in the Battle of Amiens which settled Germany's defeat and the upshot of the World War it was British tanks, British infantry and British cavalry which forced the decision. British military strength during the World War was very considerable: in 1918 there were 58 British Divisions on the Western front; no less than 5,704,000 men were mobilised and British war production even exceeded that of France in certain respects, and included 35,000 aeroplanes and 24,000 guns.

To-day, however, the needs of Britain's land forces are at the bottom of the list. Her naval armaments programme is of world political importance, and although her air-armaments programme is not on the same scale, it nevertheless raises the British air arm to a factor of considerable military importance in Europe. However, the British land-armaments programme provides only for a very minor increase in land strength, and up to 1938 the British Army had been given no independent strategic tasks in Western Europe. There is thus no question of creating any mass army, and the only hope is that Great Britain will nevertheless be in a position to strengthen the defensive forces of Western Europe by the despatch of a vigorous and mobile expeditionary corps equipped with modern arms and capable of ably seconding the motorised shock army of the French in a counter-offensive against the enemy.

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[1] Duff-Cooper, "Haig", Faber & Faber, London 1935.

[2] "*Landkriege*" in the "*Handbuch der neuzeitlichen Wehrwissenschaft*", Berlin 1936, Vol. I, pp. 436–7.

In the meantime a distinction must be drawn between the propaganda which is being carried on in Great Britain for the modernisation and mechanisation of her land forces and in favour of the adoption of modern methods of warfare, and the actual state of the British Army. And a third factor is the reform of the British Army within the general framework of British armaments.

The pioneering qualities of the modern doctrine of war as propagated in Great Britain are already generally recognised, and a Soviet military expert wrote even in 1934:

> "The views of British military theoreticians on the question of army motorisation are the most progressive to be found in the military literature of any capitalist country."[1]

And the former Chief of the Department for Motorisation and Mechanisation in the Red Army, Chalepski, writes:

> "British military experts contend that the role of the tanks is to carry out independent tasks and operations, and that tank units are capable of accomplishing independent military operations without infantry support."[2]

However, these progressive ideas have never been put into practice. The British Army is not that moto-mechanised shock army demanded by the British army reformers; it lacks both the material basis and the strategic dispensation for this. The well-known British military expert Captain Liddell Hart writes as follows concerning the weaknesses of the British tank arm, and comparing it with the Soviet tank arm:

> "The nominal 200 tanks of our solitary Tank Brigade are a puny total compared with the thousands of tanks in the chief continental armies. The only modern machines we have are light tanks so small and limited in obstacle-crossing capacity that they would be rated as feather-weights by Russian standards. The Russians have

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[1] In "*Voina i Revolutsia*", November–December 1934.

[2] In the "Bolshevist", July 15th, 1935, p. 61.

great numbers of similar machines, but their 'light tanks' are equivalent to our 11-ton medium tanks, while their medium tanks are machines of about 27 tons. Moreover, our medium tanks are still of a fourteen-year-old type, now quite unfit to be sent into the field and still less fit to go into action against modern anti-tank weapons."[1]

Referring to the new British Field Service Regulations, the Soviet military press [2] declares that it is still very far removed from being the manual of a modern mechanised army.

The Army Reform planned in connection with the general armaments programme for 1937 provided for a number of measures: the transformation of cavalry regiments into light mechanised units; the almost complete motorisation of the artillery; and new weapons for the infantry, including the new light Bren machine-gun and improved anti-aircraft guns. These measures will, of course, increase the fighting strength of the British Army, but even then it will be very modest. Even the 1937 armament programme did not plan to turn the little British Army into a real moto-mechanised shock army, and therefore its value in the event of a coalition war on the Western front will not be very great. Captain Liddell Hart recognises this quite frankly, and he writes:

> "A small field force from Great Britain, inevitably late in arrival, would seem to have little chance of influencing the issue or retrieving any advantage which an invader might gain by surprise in the first days of the war."[3]

And even the White Book published on March 3rd, 1938, provides only for a very modest further increase in the strength of Great Britain's land forces. Only when Hore-Belisha, the present War Minister, announced his new Army Reform in the House of Commons on March 10th, 1938, did it seem at last that some fundamental change was in preparation for the British Army. According to Hore-Belisha all the Divisions of the British Army are to be transformed into Mechanised and Tank Divisions. In addition the fire-power and mobility of the infantry units are to be greatly strengthened. With this it would seem that the formerly hesitant and very conservative official British war doctrine has taken a step in the direction of the modern ideas and reform proposals of Fuller and Liddell Hart, and according to a statement by Hore-Belisha on October 10th, 1938, even the Territorial Army is to be re-equipped and increased to 18 Divisions, including 5 for anti-aircraft defence. And, above all, it is not merely a question of renewing the technical resources and equipment of the British Army, but of determining the probable function of a British expeditionary force in the Western theatre of war, and that is much more important. There are already strong tendencies in the British Army Council favouring an increase in the strength and influence of the British Army in a Western coalition, and writing in the "Royal United Service Institution Journal" in May 1937 Colonel Martel of the Directorate of Mechanisation declares significantly that if a British expeditionary force were big enough to double the strength of the mobile troops of its allies, then it would really represent a factor of some importance in a war. He assumes that Great Britain's Western allies will raise a mass army, and he is in favour of Great Britain supplementing and strengthening it with a mechanised shock army.

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[1] Captain Liddell Hart, "Europe in Arms", Faber & Faber, London 1937, p. 121.

[2] "*Kraznaya Svesda*", April 14th, 1937.

[3] Captain Liddell Hart, ibid., p. 78.

However, the carrying of this plan (which now seems to have been decided on) into execution will take no little time.

CHAPTER X

ITALY AS A MILITARY FACTOR

I. THE ECONOMIC WEAKNESS OF ITALY'S WAR POTENTIAL

THE ESTABLISHMENT OF the Berlin–Rome Axis raises the question of whether the Italo-German alliance has brought about a fundamental change in the military relation of forces in Europe, and whether the claims of the Axis powers to military hegemony or even military preponderance are to be taken seriously. Italy now demands our attention as a military factor.

Italy's military strength has and will always have certain very definite and insuperable limitations, and her German allies are well aware of this. Colonel Xylander, a professor of the German War Academy, writes:

> "Italy suffers more severely from a shortage of raw materials than any other big power in Europe."[1]

He might have gone further and said that Italy has the weakest war potential of any big power in the world. The economic potential of Italy is weak from three angles: she lacks almost all raw materials of importance in modern warfare; her heavy industrial basis is totally inadequate; and her industrial apparatus as a whole is too weak to turn out the volume of armaments necessary for a first-class war.

Another German source, this time an official one, gives us the following information (in percentages) concerning the actual capacity of Italy to provide herself with important commodities: [2]

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[1] Colonel Xylander, "*Die Kriegswirtschaftliche Verfassung Italiens*", Hamburg 1935, p. 18.

[2] Weekly Report of the official German Institute for Economic Research, August 5th, 1936 (*Wochenberichte des Instituts fur Konjunkturforschung*).

Mineral oil 0·7, rubber 0, coal 3·2, chromium 0, iron and steel 37·1, wolfram 0, phosphates 0, manganese ore 14·2, tin 0, machinery 14·2, nickel 0·1, lead 69·7, copper 3·2.

The only materials Italy has or can produce in sufficient or almost sufficient quantities are nitrate, zinc and aluminium. According to the same German source there is some possibility of increasing the production of coal and copper, but nothing else. The announcement that Italy is to become self-supporting is sheer bluff, because she has neither sufficient funds nor the powerful chemical industry necessary to produce the requisite substitute materials. Her heavy industrial position is no better: she produces about one-twentieth of the pig-iron and little more than one-tenth of the steel produced by such big European industrial powers as Germany and the Soviet Union. In order to satisfy the requirements of an army of 2 million men and to build warships a country needs approximately 3·5 million tons of steel and over 2 million tons of pig-iron annually. Italy cannot produce half of those quantities. The position of her war economy is even more unfavourable than that of Japan's, because her heavy industry is even less developed, and she has no supplementary resources such as Japan has in Manchukuo. She is not the mistress of the Mediterranean as Japan is of the Western Pacific, and in consequence her war economy is in danger of being totally blockaded. In 1932 out of a total of 30 million tons of imports she obtained 17 million tons from Great Britain and the U.S.A. via Gibraltar, 1·8 million tons from Asia, Africa and Australia via the Suez Canal, 1·2 million tons from the Black Sea countries via the Dardanelles, only 3 million tons from the countries bordering the Mediterranean, and 7 million tons from Europe over the Northern land frontier.[1]

It is thus absolutely impossible for her to supply all the requirements of an army on a war footing from her own economic resources, and even "normal" war preparations are giving her increasing difficulties.

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[1] Colonel Xylander, "*Die Kriegswirtschaftliche Verfassung Italiens*", Hamburg 1935, p. 19.

2. POSSIBILITIES AND LIMITATIONS OF ITALY'S AIR FORCE

The theory of the supremacy of the air arm originates in Italy, where it was first put forward by General Douhet. Although official Italian strategy has not adopted this theory completely, Italy's greatest armament efforts are devoted to the air arm. She can never hope to possess the strongest navy or the strongest army, but in air armaments she wanted to be in the lead.

By 1937 she had succeeded in overtaking the Western powers by creating an air force of 2,000 first-line machines, and she was also ahead of National Socialist Germany in technique and the equipment of the aero-industry, for instance, her aero-industry introduced the supercharged aero-engine for altitude flights before the Germans did, and she was also ahead of Germany in the building of heavy bombers. In 1938 Italy possessed fighter planes with a speed between 250 and 280 miles an hour: Fiat CR33 and Fiat G50. According to German sources, however, Italian air material is being renewed in accordance with modern demands only very slowly, the better types of plane are not yet being mass produced, the majority of the fighter planes (Fiat CR32) are of relatively low speed, and most of the Italian heavy bombers are of the Savoia 81 type, whose defensive equipment is so inadequate that it must always be accompanied by fast fighters to protect it from attack. Italy possesses several types of bombers carrying a load of between 2 and 3 tons, and developing a speed of between 220 and 280 miles an hour: Savoia 79, Fiat BR20, Piaggio 16, and Breda 82. The light fast bombers Breda 65 and Caproni 135 have shown high flying qualities. In 1937 Italy was also ahead of the Western powers in the number of trained war pilots: 10,000 men. This fact indicates that the military leaders of Italy plan to use the air arm on a mass scale.

However, numerically the Italian Air Force must always remain within fairly narrow limits owing to the low productive capacity of the Italian aero-industry. In order to produce 200 machines a month, not a very vast figure, the Italian aero-industry had to be fully mobilised. The big aeroplane factories are already working 24 hours a day in three shifts, and owing to the lack of financial means no considerable extension of capacity is possible. The industry also lacks certain light alloys and certain special sorts of steel. At the beginning of the Spanish war of intervention the Italian bombers showed higher qualities than the German. However, their fighter planes proved to be inferior to the Soviet planes and also to the latest French planes. The successes of the Italian Air Force on the Basque front in 1937 and on the Catalonian front in the spring of 1938 were entirely due to their numerical superiority over the air force of blockaded Republican Spain. In the matter of endurance and fighting training Italy's war pilots in Spain took last place behind the Soviet, French and German airmen. Judging from the lessons of the war in Abyssinia the organ of the Soviet Commissariat for Defence pointed out the following weaknesses in Italian Air-Force training:

> "Considerable defects were revealed when the Italian Air Force went into action in Abyssinia. Despite the possession of good maps and the fact that they were able to fly at comparatively low altitudes bombing accuracy was very unsatisfactory. Italian bombers often took the air without any definite objectives and bombed at random, although they themselves were responsible for the reconnaissance work."

The weakness of her production basis will make it impossible for Italy to maintain her air force at any considerable strength in the event of war, though neither the Western powers nor the Soviet Union will experience any difficulties in this respect, and therefore any hopes Italy may have of obtaining the mastery of the air, even locally, are quite illusory.

3. THE LOW OFFENSIVE STRENGTH OF THE ITALIAN ARMY

The Italian Army can claim three advantages: numbers, good infantry equipment, and the existence of several mobile troop detachments.

The peace-time strength of the Italian Army is 39 Divisions. According to Mussolini's well-known boast the war strength of the Italian Army is to be 8 million men, and, thanks to the totalitarian militarisation of the nation, these men are said to be prepared for war even in peace-time. This boastful claim cannot be reconciled with Italy's scanty war economy possibilities. Even French newspapers like the "*Excelsior*", whose policy is not unfriendly to Italy, have expressed doubts as to whether she has even sufficient arms, etc., to equip her reserve Divisions fully. Unlike Germany, the totalitarian militarisation of the nation is without real purpose in Italy for the simple reason that there are not sufficient weapons, etc., to equip such a prodigious army as the one announced by Mussolini. The weakness of Italy's economic potential makes it impossible for her to utilise her potential man-power to the full, and this, by the way, is true of Japan and Poland too. Italy cannot raise an army of more than 80 or at the utmost 100 Divisions, i.e., a maximum of 2 million men. There are very narrow limits to the extent to which Italy's numerical strength can be translated into military strength.

In recent years the Italian infantry has been re-equipped. It is well supplied with machine-guns, trench mortars and light artillery, but not with modern anti-tank and anti-aircraft guns. According to the theory of the authoritative Italian army reformer General Visconti-Prasca, the Italian infantry is to be equipped with such a wide range of weapons that it will be capable of conducting independent offensive operations. However, this type of powerfully armed infantry has been created not in Italy but in National Socialist Germany.

The third advantage claimed for the Italian Army is the existence of mobile detachments. It possesses 3 Motorised, 3

Mobile (*celere*) Divisions, 1 Armoured Brigade, and several regiments of Bersagliere, nowadays a sort of motorised infantry. Despite this, the Italian Army compares very unfavourably with the two big continental armies, the Red Army and the German Army, in the matter of offensive and break-through power. The whole Italian Army has no more than about 1,200 tanks, and the majority of these are the light 3·5- and 4-ton tanks whose inadequate armour plating and deficient fire-power have already been displayed very thoroughly in the Spanish war of intervention. The little Fiat-Ansaldo tank serves as a sort of maid-of-all-work. Sometimes it is equipped with anti-tank guns for action against hostile tanks, and sometimes it is equipped with flame-throwing apparatus, chemical sprayers, etc., but whatever purpose it serves its fighting qualities are not very high. The Italian 8-ton tank, of which there are only very few, is regarded as a heavy tank for break-through purposes, whereas in the Red Army an 8-ton tank is a light tank. Thus, from the beginning the offensive qualities of Italy's mobile detachments are limited. Their mobility is not coupled with sufficient fire-power. Mechanised weapons are not abreast of motorised transport. In addition, Italian heavy artillery is relatively weak, although Italy is making very great efforts within her general programme of armaments to remedy this defect.

Captain Liddell Hart's description of the Italian Army is a very fair one:

> "There are three mobile divisions, mainly of motorised troops, with a small proportion of armoured vehicles. Tanks have not been much developed. There are a few hundred Fiat tanks, but they are very small, and limited in obstacle-crossing capacity. The infantry division is rather weaker in artillery support and also in automatic fire-power than the French. The Italian Army's progress towards mechanisation was for a long time retarded by lack of money, and reluctance to be dependent on outside fuel supplies. It was thus in form and outlook an old-style army which was shipped out from Italy to Eritrea in 1935."[1]

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[1] Captain Liddell Hart, "Europe in Arms", Faber & Faber, London 1937, pp. 34–36.

Italian land-warfare strategy is said to be based on rapid manœuvring, and vigorous offensive to secure a quick decision. The real reason for this insistence on a quick decision is, in the last resort, Italy's inability to support a long war. General Pariani of the Italian War Ministry, writing in the "*Popolo d'Italia*",[1] has his own way of admitting this:

> "Italy is not rich in raw-material resources, and she can therefore not seek a protracted war involving great material expenditure. And in addition the idea of positional warfare is inconsistent with the dynamic character of the fascist regime."

It is the same tendency, imposed by the same objective conditions, which can be observed in Polish and Japanese strategy: the urge to compensate a lack of war material by concentrating on obtaining a quick decision by offensive action. However, none of these powers has war technique and the modern weapons of offence necessary for the successful carrying out of such a strategy. A comparatively easy victory in Abyssinia over a practically unarmed enemy seems to have led Italian military theorists to dangerously facile conclusions, though in the meantime experience in Spain and in particular the Battle of Guadalajara has demonstrated the difficulties experienced by the Italians in the successful use of motorised units against even a very moderately armed European opponent.

4. THE STRUGGLE FOR MEDITERRANEAN HEGEMONY

The recent development of the Italian Army and of Italian strategy leads us to two conclusions.

Following on the conquest of Abyssinia the Italian naval and air arms are being placed in the foreground, and the greatest possible efforts are being made to increase their strength. They are regarded as the decisive weapons to achieve the new aims of Italy's strategy.

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[1] General Pariani announced the reorganisation of the Italian infantry in the summer of 1938 (increased artillery support, and greater mobility for Infantry Divisions). The first results were seen in the August 1938 manœuvres. This and every other reform will come up against the insurmountable obstacle represented by the low productive capacity of Italy's armament industry.

The main scene of operations for Italian naval and air strength is to be the Mediterranean, and it has been officially proclaimed as the great and decisive theatre of war. On May 17th, 1937, General Valle of the Italian Air Ministry informed the Senate that the strategic fulcrum of the Italian air arm had been shifted from Northern Italy to the Mediterranean, the Red Sea and the Indian Ocean. This shifting of forces is characteristic of the change in Italian strategy. Mediterranean hegemony has become Italy's chief strategic aim.

This struggle for dominance has a double aspect: a British and an Italian. On the one side there is the strength of the British defence, and on the other the strength and position of Italian offensive strategy.

Italy is working feverishly to strengthen her navy. In 1939 the Italian Navy will be given two new battleships, the most modern and powerful ships of the line in the world. The new naval building programme announced in 1938 provides for the construction of two further and similar battleships and 12 big destroyers. Very fast destroyers with a speed of 44 knots are also being built, and the number of submarines is to be brought up to approximately 100. The technical qualities of these new Italian warships will be high. The character of the new naval building programme indicates the intention of Italian naval strategy to pursue active operations. However, this naval building programme would seem to be about the very utmost Italy can undertake, and the productive capacities of her shipyards are apparently being occupied to the full with its fulfilment. Like the Italian air and tank arms, the naval arm has very definite limits. Even this maximum naval building programme cannot, as we have previously shown, guarantee Italy even naval parity with the combined naval forces of Great Britain and France in the Mediterranean, much less naval preponderance, because the British Admiralty is now keeping its heaviest concentration of naval strength for the Mediterranean. It is clear therefore that

Italy's naval strategy is based on the risky assumption that the Italian Navy could carry out offensive operations against a numerically stronger opponent.

This strategy proposes to take full advantage of Italy's favourable geographical situation in the Mediterranean and her valuable naval bases. Hector Bywater, the well-known British naval expert, assumes that Italy's plans for naval warfare envisage the blocking of the Mediterranean at three points by means of her combined naval and air forces: at the narrowest point between Sicily and Cape Bon (Tunis), where the Italian island of Pantellaria holds a key position; between Siracusa and Tripoli along a line of about 260 miles; and finally in the Eastern half of the Mediterranean between the Dodecanese Islands and Tebruk, the Italian naval base in Libya. Italian military publications confirm this assumption. Italy's war plans go even further, and envisage a sort of totalitarian air and sea offensive in the Mediterranean. The Ionian Sea and the Libyan section of the Mediterranean are to represent a broad area for big offensive operations. The Tyrrhenian Sea, almost surrounded by Italian territory, is to be an enclosed base for the supply, re-fuelling, etc., of the air and naval units operating in the advanced theatre of war. The Adriatic Sea is to be a close and absolutely inaccessible area, a secure and quiet zone, a sort of maritime hinterland, in which damaged ships can be repaired and re-commissioned without interruption from enemy attack. The whole Italian peninsula is to be the land base of operations for the war in the Mediterranean.

However, even this wide plan of operations does not solve the problem of waging offensive naval warfare in the Mediterranean. In the Western section of the Mediterranean the important naval bases are all in French hands, and this explains Italy's desire to maintain her footing on Majorca at all costs. In the Eastern section of the Mediterranean the important naval bases are in British hands: Cyprus, Haifa and Alexandria. And in the centre of the Mediterranean the Anglo-French block holds such important positions on the edge of the Italian zone as Malta, Bizerta and Corsica. Italy's opening position in the Mediterranean is suitable for defensive purposes, but it is not good enough to guarantee victory against an enemy superior in material resources.

5. A WAR AGAINST THE WESTERN POWERS?

In examining the politico-military consequences of the Italo–German military alliance we must distinguish carefully between fact and fiction. What is Italy's military value as an ally of National Socialist Germany? On June 2nd, 1937, the "*Börsen-Zeitung*", an organ known for its close connections with the German War Ministry, published an obviously inspired article in connection with Blomberg's visit to Rome, indicating the hopes the leaders of the German Army cherish in connection with Italy. Italy's totalitarian militarisation is rated highly and compared with the insufficient preparedness of the Western powers:

> "Italy's defensive efforts are not to be compared with the armament programmes of other States, because it is not merely a question of raising a few more regiments, etc., or of forming a few more air squadrons or naval flotillas, but of creating a new generation of civilian soldiers, of developing a nation in arms, no more and no less."

The article then praises the daring of Italian strategy:

> "It regards a war of movement with rapid and decisive blows as offering the one possibility of avoiding the characteristic phenomena of the World War. Thus, all arms, no matter to what category they belong, are being trained for powerful and rapid action."

In other words, the article stresses the similarity of strategy which marks the military aims of the two big fascist powers and opens up the prospect of developing uniform strategical methods within the framework of a military alliance.

We may be forgiven for observing that as far as the generous praise accorded in this article is concerned we are dealing with fiction rather than fact. As we have already pointed out, Italy's totalitarian militarisation can never bear much fruit because it lacks the necessary technical basis, and Italy's offensive strategy is in the same condition. However, the pro-Italian angle of Germany's military policy encourages its own conception of a sudden and surprise attack in the West. The danger to the Western Powers is increased by the Italo–German alliance. Italian strategy argues that Italy occupies a military key position in Europe; that she is in a position to turn the scale by her military intervention. Writing in the Rome journal "*Echi et Commenti*" in 1937 General Visconti-Prasca declares that Italy can reckon with a unique operative availability of all her fighting forces, whereas Germany and France mutually tie each other's hands. To put it more plainly, Visconti-Prasca is hinting that the Italo–German alliance guarantees Italo–German military hegemony in Europe. Politically and strategically, the Italian and German forces are not given the same main fronts on which to operate. The strategic fulcrum for the Italian air arm is in the Mediterranean Basin, and it is intended for use in combination with the naval arm against British sea communications there. The front of the Italian land forces would be formed in the West against Southern France to threaten France along the Toulon–Lyon line. The main theatre for National Socialist Germany, on the other hand, remains in the West along the French Eastern frontier between the North Sea and Switzerland. A divergence arises at this point between Italian and German strategy, and a dispute amongst the German military strategists as to the military tasks of Italy as a member of the Axis. The policy of military alliance pursued by National Socialist Germany envisages Italy in the old role of Austria–Hungary. Many German military theorists (including General von Leeb, the Commander in Chief of Army Group II, who resigned on February 4th, 1938, and who was intended by virtue of his command to be supreme commander on the German Western front in the event of war) consider that Germany's greatest strategical error in the World War was that she did not concentrate considerable Austrian forces on the Western front in the early days of the war to lend added strength to the German drive through Northern France. In accordance with this viewpoint the chief military task of Italy would be to support on land and in the air the launching of a concentric blow against France on the Western front. However, there is another school of thought in Germany which is in favour of Italy using her military strength in the South. This school is anxious to make fascist Italy into the naval arm of National Socialist Germany in the Mediterranean in order to strike a blow at the Western Powers there. According to this viewpoint it will be Italy's task to open up the way into Asia and Africa to a German fascist Central European block via the Mediterranean.

A German military publication writes:

> "The Italian Empire is the bridge to the near-by African continent with its raw materials, and beyond that, over the sea to the Indian Ocean. Italy is the naval power of Central Europe in the Mediterranean. Central Europe cut off from the Mediterranean is a prisoner threatened with isolation and greatly hampered militarily. In this way the North–South Axis is lengthened beyond the seas."[1]

Several leading French military experts have examined the possibility of an Italo–German coalition war against France, and General Duchene writes as follows in the right-wing newspaper "*Echo de Paris*", which is traditionally friendly towards Italy:

> "As far as Italy is concerned, there is no doubt whatever that present events just as much as the mentality of her 'leader' will not let her hold back—she will be found on the side of her ally."[2]

The ally referred to is, of course, National Socialist Germany. However, General Duchene, like General Armengaud, is convinced that a few French Divisions would be sufficient to hold up the Italian attack on the Alpine frontier. But as early as 1933 General Armengaud pointed to what was in his opinion a much greater danger, namely an Italian air attack on France, which would threaten the whole of Southern France along the line Vesoul–Toulouse.[3] Since then the

[1] "*Deutsche Wehr*", January 13th, 1938.
[2] "*L'Echo de Paris*", July 15th, 1937.
[3] In the "*Revue des Forces Aérienne*", 1933.

striking power of the Italian air arm has increased, but as against that, its centre of activities is much more concentrated on the Mediterranean and its coasts.

An examination of the state of Italian armaments and war possibilities permits the following conclusion: At sea Italy does not represent a decisive factor; the Italian Navy is weaker than the combined Mediterranean forces of Great Britain and France. The striking power of the Italian Army is not very great. The Italian air arm could launch a dangerous "initial blow", but it could not be maintained at full strength in the event of a long war. The Italo-German air arms may be numerically stronger than those of the Western Powers, but measured against the combined air forces of a collective security block as a whole (to which not only Great Britain and France, but also the Soviet Union would belong) they are far inferior in strength. The claim of the Italo-German coalition to military hegemony in Europe is therefore without foundation, and Italy does not occupy a key position in European military affairs. However, the existence of the Berlin-Rome Axis complicates the defensive strategic position of the Western Powers and increases the urgent need for co-operation with the Soviet Union.

CHAPTER XI

THE RED ARMY AND THE GERMAN ARMY

I. SIMILARITIES

BECAUSE THE RED ARMY and the German Army represent the two poles of present-day Europe, they are politically and technically readily comparable. The question of whether the military strength of the one is greater than that of the other, and if so which one, is undoubtedly a most important one.

The only army in Europe which can be compared with the German Army is the Red Army, certainly not the French Army, which as a result of its slow mobilisation and its essentially defensive strategy represents an entirely different type of army. There is a striking parallel in the construction, equipment and war doctrine of the armies of von Keitel and Voroshilov. Both armies are definitely mass armies; both are highly mobile; both are "industrialised" armies, strongly motorised and mechanised; in both cases modern weapons of offence have been introduced to saturation point; in both armies the air and tank arms represent the nucleus of the army as a whole, and the tactical-operative doctrines of their use in action are similar, both providing for independent operations on the part of the air arm and of the moto-mechanised units; and finally, many similar features can be found in their strategic conceptions.

It is no secret that the Red General Staff has adopted everything it considered of value in traditional German strategy. Whilst carefully examining the strong points of Germany's strategy in the World War, Soviet military experts have also noted its weak points and learned from them.[1]

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[1] On February 23rd, 1937, the "*Pravda*" wrote: "We have never considered it beneath us to learn the art of war from our enemies. In our military schools we study Clausewitz, Moltke, Schlieffen and Ludendorff. We have worked hard and zealously, and in some respects we think have outdistanced our 'teachers'."

Quite a considerable part has been played in the building up of the young military power of the Soviet Union by Prussian–German military experience.

2. WHICH HAS THE STRONGER WAR POTENTIAL?

Although the armies of National Socialist Germany and the Soviet Union are similar in structure, the original sources of their strength vary very considerably. The compositions of their war potentials are differently made up, and their strategic positions are different.

However, two elements of the war potentials of National Socialist Germany and of the Soviet Union can readily be compared: the militarisation of their economic resources, their man-power, and their industrial strength.

In three respects the advantage of Germany over the Soviet Union is indisputable: compared with the Soviet Union Germany's economic resources are much more readily available for war purposes, they are centralised territorially and not spread out over huge areas as is the case in the Soviet Union; Germany also has a much more highly developed network of ways and communications; and, finally, her military power is based on an older and more perfected technical development. However, if we compare the total natural and economic elements of war potential in the two countries we shall immediately see big differences which are to Germany's disadvantage. The heavy industries of the two countries are more or less equal in strength, but at the same time the rapid progress being made in the Soviet Union bids fair to outdistance Germany. In December 1936 Soviet production of steel and pig-iron exceeded German production for the first time, but since then, however, the heavy industrial production of the two countries has developed more or less parallel, with a small lead in Germany's favour, but not one of any great war importance. This fact represents a great historic change in the situation of Europe if we remember that in 1914 Russia's heavy industrial production was only about one-quarter that of Germany's (27% with regard to iron and steel). On the other hand, the Soviet Union produces five times as much grain as Germany: 102 million tons as against 21 million tons. It has three and a half times as much livestock: 165 millions as against 49 millions. The advantage of the Soviet Union in food supplies, natural resources and man-power reserves is enormous, and the purely military significance of this advantage is of very great importance.

Germany's supplies of raw material are definitely inadequate, and as a result the maintenance of her war material supplies in the event of a long war is highly problematical. The only raw materials of primary importance for war purposes which Germany possesses in fair abundance are coal and nitrogen and its derivatives. Her supplies of all other raw materials are either totally deficient or available only in insufficient quantities. The raw material supplies at the disposal of the Soviet Union, on the other hand, are adequate in almost every respect—and it must not be forgotten that modern warfare is more dependent on an uninterrupted supply of raw materials than ever before. The following table shows us the big difference between the war material supplies at the disposal of the two countries:

	Percentage of Essential Raw Material Supplies each country is capable of producing:	
	Germany	Soviet Union
Oil	30	100
Iron Ore	28 [1]	100
Copper Ore	11	
Manganese Ore		100
Bauxite	7	100
Zinc	48	100
Chromium		100
Rubber	25 [2]	56 (Artificial)
Cotton		100

The respective degrees of dependence on raw-material imports thus differ tremendously; in Germany's case the dependence is very great, whilst in the case of the Soviet Union it is almost non-existent. As the need for raw materials will be much greater in the next war than it was in the last, Germany will be threatened with exhaustion much more quickly than she was then, whilst the economic possibilities of the Soviet Union in the event of war will be practically inexhaustible.

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[1] This figure shows only the volume of German iron-ore production. The real percentage of her needs she will be able to supply is considerably lower because the ferrous content of German iron ore is low.

[2] This is the approximate production figure for artificial rubber in Germany.

For the first time the numerical factor will begin to play its proper role on the Eastern front, thanks to the rapid economic development of the Soviet Union, the opening up of her vast natural resources, and the development of her engineering and heavy industries. For the first time it will be possible to utilise the man-power potential of Russia and harness it to the war machine, whereas during the World War this was impossible owing to the shortage of weapons and equipment. General Sikorski points out correctly that all economically weak States are unable to utilise their potential man-power reserves to the full. That was true, during the World War, of Russia, and despite her enormous man-power she could not raise as many Divisions as Germany, so that she was unable to take advantage of her superiority in man-power over Germany. To-day the situation is very different. The existence of powerful war industries amply supplied with raw materials makes it possible for the Soviet Union to translate her man-power superiority over National Socialist Germany into military strength. This superiority in man-power will make itself felt in every particular in the number of fully-equipped units of all arms, in the number of reserves to fill up the ranks, and in the number of workers available for the war industries, etc. The numerical factor multiplied by modern war industries also gives new possibilities to technically highly-developed, powerful and complicated arms like the air force. Even in 1934 General von Metzsch calculated that the Soviet Union would be in a position to raise an air force with 400,000 trained men at its disposal.

Modern industrial warfare does not reduce the demands on man-power; on the contrary, it increases them enormously.

General Debeney writes:

"When the modern war of material resources and technique begins, a whole people with all the means at its command, mobilised from its economic potential and man-power reserves, will be hurled at us as in the days of Attila."[1]

The idea that small fully-mechanised armies of professional soldiers will fight the wars of the future is an illusion from the technical point of view, also because the mass use of modern weapons with their complicated technical apparatus will enormously increase the man-power requirements of the army. According to General Debeney's calculations a tank in action manned by a crew of 2 requires 46 men behind the lines and at home working to keep it in action, to repair it and if necessary replace it. In the same way one aeroplane needs 60 men to provide it with everything necessary, including ground staff, etc. According to Soviet calculations the requirements are even higher: 70 men for a tank and 125 for an aeroplane.[2] Not only the demands on raw material, but also man-power demands will be greater in the next war than in the World War. The significance of the man-power factor has also increased in importance. Whilst it is true that great man-power reserves can be properly utilised only when powerful war industries are there to equip them adequately, it is also true that a modern army and the highly-complicated war industries behind it can be developed to the height of their war potential only when they have the advantage of enormous man-power reserves to draw on. Germany's man-power reserves are certainly great, but nevertheless they are limited: absolutely when we take into consideration the increased demand for and the attrition of forces in the coming war, and relatively as compared with the inexhaustible man-power reserves of the Soviet Union, not to forget entirely the colonial man-power reserves of Great Britain and France, which are far from insignificant. We may assume without much fear of exaggeration that the aero-industry of a great power working at full blast to provide the enormous requirements of modern warfare will require not much less than a million men to keep it going. In a comparison of war potential one can very well say that of two powers with equal industrial strength and an equal degree of militarisation—like the Soviet Union and Germany—that power will have the military advantage which possesses the greater man-power reserves, i.e., in this case, the Soviet Union.

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[1] In the "*Revue des Deux Mondes*", March 15th, 1933.

[2] "*Voina i Revolutsia*", March–April 1933, p. 94.

It must also be pointed out that what is apparently the most important advantage enjoyed by Germany over the Soviet Union, in the matter of war potential, has its disadvantage too. The greater availability of Germany's natural resources is a result of her smaller territory, but that small territory also means a shortage of foodstuffs and raw materials and, a very important point, greater strategic vulnerability.

3. ARMAMENT VOLUME AND STRATEGIC POSITION

We must now compare the two armies from a purely military standpoint: which, if either, has the advantage in armament? Is there any sphere in which the German Army is better equipped than the Red Army? We have seen previously that the strongest side of the German Army is the exemplary equipment of its infantry. The exact norms of Soviet infantry equipment introduced since its re-equipment have not been made known, particularly in its own artillery support. According to the latest semi-official reports the number of automatic weapons in an Infantry Division of the Red Army has increased in recent years by 400% and the artillery equipment by 250%. If we were to assume that a German Infantry Division has somewhat stronger fire-power (not an assumption which can be proved), this would not be of any great importance. In a speech delivered on February 23rd, 1938, Voroshilov declared:

> "In the matter of technical training and equipment our Infantry Divisions are not inferior to those of the most highly-developed capitalist military powers."[1]

There is no reason to doubt the truth of this statement.

[1] Reported in the "*Isvestia*" on February 24th, 1938.

Generally speaking we might say that a German Infantry Division has a slight superiority in machine-guns and artillery, whereas a Soviet Infantry Division is stronger in trench mortars and anti-tank guns. On the other hand, the superiority of the Soviet Infantry Divisions in air and tank armament is beyond all doubt. Generally speaking it is possible to say that the armament and fire-power of a Red Army Infantry Division represent the highest possible norms permitted by the technique of modern warfare, i.e., the highest possible degree of equipment having regard to the necessity of mobility. Colonel Schumski, a well-known Russian military expert from the days of the World War who is now living abroad, but who nevertheless maintains an objective judgement, writes as follows concerning the present Russo-German armament race:

> "Certainly, Germany will catch up with the Soviet Union, but she will not outstrip her. And the reason for this is not that Germany could not, but because there is a limit to the extent to which a Division can be provided with arms and equipment. If this limit is overstepped, then a Division must develop into an enormous immobile mass stretched out over many kilometres, and it is then obvious that any further addition to its armament must unfavourably affect its fighting capacities and represent oversaturation."

Colonel Schumski assumes therefore, and he is right, that the German Army per unit and per Division cannot have any stronger armament than the Red Army, that it cannot exceed the armament norms of the Red Army. However, as the Red Army has a far greater number of units, above all, twice as many Infantry Divisions at peace-time strength, it follows that the Red Army as a whole has a considerably greater volume of armaments than the German Army.

The Red Army has a much greater volume of armaments in the decisive modern weapons of offence: in aeroplanes and tanks. It is an extremely important fact for the politico-military situation of Europe, perhaps even the most important fact in the whole situation, that in 1938 the Red Army—even without its special Far Eastern forces—had more than a twofold superiority in aeroplanes and tanks over the German Army. The strength of the Red Air Force in 1938 was about 8,000 first-line planes, and its tank-arm strength about 12,000 machines of all categories; both, be it observed again, without its special Far Eastern forces. The 1938 strength of the German Army in tanks and aeroplanes was between 3,000 and 4,000 planes and 5,000 tanks. Even if we assume that in 1939 National Socialist Germany will make a special effort to turn out modern weapons of offence (a very likely contingency), she will under no circumstances be in a position to obtain a better relation than 1 : 2 towards the Soviet Union in both these decisive arms. Under all circumstances, and even when war production is at full blast, the Red Army will be able to maintain at least double the strength in aeroplanes and tanks of the German Army. The two industries in question have already been developed to such dimensions in the Soviet Union, and the latter's advantage in time, experience and productive capacity is so great, that National Socialist Germany cannot possibly catch up. Colonel von Bulow writes as follows concerning the Soviet aero-industry:

> "The figures prove that within a few years Soviet Russia has far outstripped the productive possibilities of all other countries, including the U.S.A. It is hardly likely that any other country will ever be in a position to catch up with Soviet Russia in this particular branch of the armament race."[1]

The German aero-industry is believed to have about only half of the productive capacity of the Soviet aero-industry: 120,000 workers employed in the industry as compared with 250,000 in the Soviet Union, and a total production of between 4,000 and 5,000 planes as against 8,000 in the Soviet Union in 1936. The start which the Soviet Union has in the matter of tank production is even greater. In 1936 the Soviet Union had about thirty times as many tractors as Germany, and, of course, the production of tractors represents the basis of tank production. The mechanisation of agriculture in the Soviet Union provides the broad basis for the motorisation of the Red Army. In 1938 about 450,000 tractors were in use in Soviet agriculture, and, if necessary, every tractor is a valuable means of army transport, or, constructed a little differently and armed, a tank. The mechanisation of Soviet agriculture also provides an inexhaustible reserve of trained man-power for army motorisation: since 1930 3·3 million men have been trained as mechanics in various branches of mechanised agriculture. As the "*Pravda*" of December 16th, 1936, points out, they can readily be used in the event of war as lorry drivers and tank crews, and, with a supplementary training, as airmen, artillerymen and submarine crews. Soviet tank production has practically limitless possibilities, and in this respect Germany cannot hope to compete.

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[1] In the "*Militarwissenschaftliche Rundschau*", December 1936.

The question of quality remains. As far as the Soviet Air Force is concerned, its technical superiority is beyond all doubt, and it has been abundantly proved in the Spanish war of intervention, in which the aeroplanes of both countries have fought. According to the report of the Spanish correspondent of the Paris "*Journal*", a newspaper which is by no means friendly to the Soviet Union, the speed of Soviet bombers was about 50 miles an hour faster than that of the Junkers bombers. In addition, the quality of the Soviet bombs, and the effective area of their explosive force, have astonished all foreign experts who saw them in action in Spain. The range of the Soviet 76mm. field gun is greater than that of the German 77mm. field gun: 8 miles as against 7, and the same is true of the heavy anti-aircraft guns of the two countries. The fighting qualities of the Soviet tanks are also greater than those of the German tanks, and, in addition, the Red Army possesses a much greater variety of tank types. In what spheres, then, can the German Army claim technical superiority? Probably with regard to light anti-aircraft guns and to optical instruments, although as against this the quality of the navigational instruments of the Red Air Force is admittedly higher. Germany probably has a technical advantage in the matter of war chemistry too, but chemistry is, generally speaking, not an independent weapon, and its effective use depends largely on the quality and strength of the weapons which act as a medium for its use, i.e., the air force and the artillery. And in these respects the German Army is inferior either both in quality and quantity, as in the case of the air arm, or in quantity without being at all superior in quality, as in the case of the artillery.

The facts of the case therefore force us to the conclusion that despite the older and more intensive technical development of Germany, she has no advantage in armaments over the Soviet Union either in quality or quantity.

In conclusion we may say that the technique of the war industries of the two countries is more or less on the same level. On points, i.e., in individual weapons and types, the war technique of the Soviet Union probably has the advantage, and, in particular, the qualitative superiority of the Red air arm is of tremendous importance. On the other hand, where Germany may have the advantage in quality with regard to one or two types of arms, this advantage is quite certainly not so great as to affect the course of the war. However, the advantage which the Red Army possesses in the matter of armament volume is based on highly-developed war industries and may very easily prove decisive for the upshot of the war.

The question of armament levels is closely connected with the strategic position of the two countries. It is a problem of the distribution of offensive and defensive chances determined by the opening position from which armaments will be brought into play. How does the question of security stand to-day as it is determined by the strategic opening positions of the Red Army and the German Army? The development of war technique since 1914 has altered the problem to some extent. In 1914 Russia's security was favoured by the enormous extent of her territory, and it was this fact which, as we have shown above, caused Schlieffen and Falkenhayn to abandon all idea of obtaining a rapid victory against Russia. Added to this natural bulwark to-day there is the technique of modern defence; the powerful line of fortifications on her Western frontier. Further, the powerful offensive capacities of the Red Army represent an important component of the security problem. Above all, however, the enormous extent of her territory retains its protective significance even under the altered conditions of war technique, and it now protects the country from attack in the air as well. Security to-day is primarily air security. Whereas all other European countries are threatened with terrible dangers from the air, the Soviet Union enjoys almost complete air security, and this fact greatly lightens the tasks of the Red Army both on the offensive and in the defensive.

Colonel von Bulow writes as follows on the point:

> "Russia is the only European State which is unlikely to be attacked effectively from the air owing to the enormous extent of her territory. The vastness of the country, the comparatively low density of its population and the fact that its war industries and governmental and administrative centres are far away from the frontiers afford it a certain natural protection from air attack despite the increase in the range of the modern bomber. From the standpoint of defence therefore the air strategic situation of Soviet Russia could not be more favourable. Soviet Russia is a country which at the present stage of aviation technique need have no fear for its air security."[1]

Germany's strategic situation has also changed since 1914, but for the worse, owing to the revolution in modern war technique. National Socialist Germany has undoubtedly the most unfavourable air strategic situation of all the European big powers. In the scale of air security the Soviet Union heads the list in Europe, whilst with the exception of one or two small countries, Germany foots it. A German air expert, Gandenberg von Moisy, writes as follows:

> "The distribution of her population makes Germany three times as susceptible to air attack as France, four times as suceptible as Czechoslovakia, and sixty times as susceptible as Russia. . . .
>
> "Berlin, the 'air junction' of Europe, is highly vulnerable not merely because of its vast concentration of people and vital centres, and because it is the administrative centre of the country, but also because it can be reached easily from all sides (from the East in about half an hour even). The big continental air lines converge on Berlin. A centre extremely vulnerable to air attack can be com-

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[1] In the "*Militarwissenschaftliche Rundschau*", December 1936, pp. 797–8.

pletely deprived of its defensive strength, including its morale, in a very short space of time in the event of mass air attack."[1]

Colonel von Bulow puts the danger of air attack even more succinctly:

> "The action radius of French bombers from the West, and of Russian–Czech bombers from the South and the South-East overlap widely, and there is not a single spot in Germany which is beyond their reach".[2]

Even though Czech aerodromes, etc., will no longer be available, the whole of Germany still lies within the action radius of Soviet bombers, and the advantage of this to the Red Army is too obvious to need stressing.

4. WEAKNESSES OF THE GERMAN ARMY

The Red Army is not only the one army which can be compared to the German Army in its structure, its armaments and its strategic aims, but it is also the one army which is superior to the German Army.

This superiority has been made possible by the time element advantage enjoyed by the Red Army over the German Army both with regard to equipment and training. When in 1933 the Reichswehr, a small professional army with limited equipment and without modern weapons of offence, began its development into a powerful modern army, the Red Army was already a mass army liberally supplied with all types of modern arms, and with at least 8 million trained reserves. When National Socialist Germany began to raise a mass army and to develop powerful armaments, this stage had been passed long before by the Red Army, and it possessed in addition a highly-trained corps of specialists and a perfected war technique. The time-element advantage possessed by the Red Army not only gave it a superiority in numbers and technique impossible for Germany to neutralise, but it also secured it the possibility of more rapid and at the same time more organic development. The German Army, on the other hand, has been built up in a frenzy, and the pace has been forced to the utmost in every respect: the formation of new units, the introduction of new weapons and the accumulation of modern war materials.

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[1] In "*Wissen und Wehr*", March 1934, p. 229.

[2] In the "*Militarwissenschaftliche Rundschau*", December 1936.

The superiority of the Red Army, conditioned by its time-element advantage, becomes very clear when we take a closer look at the point from which German re-armament began, namely the condition of the Reichswehr in 1932. The Reichswehr always paid particular attention to the training of first-class infantry, and it represented a very considerable organisational concentration of forces. As General von Seeckt admitted at the time, "with the available facilities a much larger army could be managed and led". However, the Reichswehr, with all its strong points, was not a modern mechanised and highly mobile shock army of the type demanded by such army reformers as General Fuller. In fact, technically speaking the Reichswehr was backward, and its practical training was therefore equally backward, and General von Seeckt declares in his book:

> "I am betraying no secret when I say that the prohibition of the air arm represented the greatest weakness in the training of the Reichswehr."[1]

He is right, but he might also have added the prohibition of the tank arm and of heavy artillery. Germany's military leaders harboured no illusions as to the real fighting value of the Reichswehr in a European war. Writing in 1930 of the possibility of a coalition war of Germany and Italy against France, Poland and the Little Entente, Ludendorff prophesied speedy collapse for Germany. In his opinion Western and Central Germany would have been occupied by the enemy within 6 weeks of the outbreak of hostilities.[2] And in 1933 Justrow, one of the keenest German military observers, described the prospects of the Reichswehr in a war with France.[3] In his opinion (and we shall not go far wrong if we assume that it was also the opinion of the leaders of the Reichswehr) the Reichswehr of that day would not even have been in a position to form an unbroken line of defence in the West. It would have been compelled to retreat far beyond the Rhine and to form a defensive line deep within German territory.

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[1] General von Seeckt, "*Die Reichswehr*", Berlin 1930.
[2] General Ludendorff, "*Der Krieg droht auf deutschem Boden*", Berlin 1930.
[3] Justrow, "*Feldherr und Technik*", Berlin 1933, pp. 183–7.

General von Metzsch has also described the politico-military situation of Germany at the beginning of her re-armament:

> "The enormous start enjoyed by our neighbours in armaments cannot be neutralised in any of the ordinary ways. A deficit in military strength extending over 14 years cannot be wiped out overnight by any known means."

It is certainly true that it could not be done by ordinary means, and not overnight, but in a few years with special efforts in the production of armaments Germany has done a tremendous amount. But even here there are limitations. In 3 or 4 years enormous accumulations of armaments can be piled up and preparations can be made to place industry on a war footing, but it is much more difficult to train the masses of men required. If armaments are forced forward at such a feverish pace it is inevitable that military training should lag behind war technique. After a long period of demilitarisation it is impossible to train men in the use of complicated modern war technique with the same facility that factories can turn out war materials in mass production. And here is the biggest weakness of the German Army to-day. The standing army of National Socialist Germany has strong effectives and its material equipment is complete, but it still lacks cadres of officers trained in the use of modern war technique (experienced experts thoroughly conversant with all branches of military technique), and, above all, masses of reserves who have had a proper military training in the ranks of a modern army.

According to the statement of Daladier before the Military Committee of the French Chamber of Deputies in 1936, the German Army had only 18,000 officers of all ranks and arms, whereas at the same date the Red Army had just as many officers who had actually passed through Soviet War Academies, i.e., officers who were trained for General Staff service or for the leadership of big troop units. The French Army, which is considerably smaller than the German, has about 27,000 officers. General Temperley, who was present at the big German manœuvres in Upper Hesse in the autumn of 1936, reports in the "Daily Telegraph" that he was struck by the small number of officers with the troops, some companies having only one or two officers each. In 1939 the German Army will have only between 25,000 and 27,000 officers, and will suffer in particular from a shortage of highly-trained officers for staff appointments, etc. The fine German Officers' Training Schools in Potsdam, Dresden, Hannover, Munich and Vienna turn out only 3,000 graduates annually.

The period in which Germany's re-armament was carried out was too short to permit the formation of highly-trained cadres of military experts satisfactory both in quality and quantity. At least 4 years are necessary to train an officer for service on the General Staff, and at least 3 years are required to train a war pilot really thoroughly.

The weakest spot in the whole structure of the German Army is its lack of trained reserves, because trained reserves are a decisive element in the composition of any modern army, and General Debeney writes:

> "The term war strength is identical with trained reserves. The masses must be trained, incorporated and organised. If this is not the case the mass represents a horde and the numerical factor is worse than useless."

In the first half of 1939 the German Army at full war strength will have only about a million trained reserves who have gone through a normal military organisation, whereas the Red Army has no fewer than 4·5 million reserves who have served exclusively in the ranks of its cadre troops, and over 4 million reserves who have served in both cadre formations and territorial formations during the past 5 years, i.e., men who have been trained in the use of modern arms. The other reserves of the German Army were trained in semi-military organisations of various sorts, and their training was first of all not uniform and secondly it was very often distinctly amateurish. In his report on the French Defence Budget, Deputy Bernier dealt with the question of military organisations in Germany, mentioning the following groups of reserves at the disposal of the German Army:

1. Fully trained reserves, who had served in the army or in the police;
2. Reserves who had served as temporary volunteers in the army, and had therefore not been fully trained;
3. Reserves who had served in the so-called reserve formations of the German Army: eight weeks' preparatory training for the 1901–1919 classes;
4. Reserves trained in the formations of the former frontier defence league, the semi-military organisations (Storm Troops, etc.), and reserves not intended for service in the field;
5. Reserves of older classes from the days of the World War.

According to the calculations of Bernier, Germany has over 4,450,000 fully-trained and half-trained reserves, including 900,000 fully-trained reserves who have been through the army and the police, and including 1,800,000 men who were trained during the World War, i.e., older classes, men of 38 and over, who are not generally suitable for front-line service. The remaining reserves included in the total figure consist of men who are half-trained, and certainly less trained than the men who have been through the territorial formations of the Red Army.

There is no doubt that the military leaders of National Socialist Germany are working hard to make up their deficiencies in trained reserves, and in time the German Army will, of course, succeed in making up a certain amount of the headway the Red Army enjoys in this respect, but the superiority of the Red Army in numbers and in quality can no longer be neutralised completely. Thus, having regard to the military history of the two countries, a paradoxical situation has developed in which the Red Army is superior to the German Army not only in armament volume, but also in training and tradition.

CHAPTER XII

THE RED ARMY IN A EUROPEAN DEFENSIVE COALITION

1. RE-ALIGNMENT OF FORCES IN THE NEW ENTENTE

THE TREMENDOUS MILITARY progress of the Soviet Union must not be regarded as an isolated factor; it has developed into a decisive factor in the relation of forces between the two coalitions, and at the same time it determines the new power and possibilities of a European defensive coalition. The military strength of the Soviet Union benefits the whole coalition to which it belongs. It leads to a military revolution both in favour of and within this coalition. The order of precedence, the order of military strength in the new Entente has changed. The forces of the new coalition are differently distributed to-day. Let us consider what would have been the course of the World War if the Russian Army had been properly led strategically and if its technical development had been up to that of the Western Powers.

In everything, in war technique and in strategy, the Red Army of to-day is the antithesis of the Tsarist Army of the World War. However, even the weak Tsarist Army of the World War was by no means a negligible military factor.

2. RUSSIA'S ROLE AND HER FAILURE IN THE WORLD WAR

The first victories of the Entente coalition in the World War were won by Russian armies; in August 1914 near Gumbinnen and in Galicia, i.e., before the Battle of the Marne, and at a time when the armies of the Western Powers were being rolled backwards. These Russian victories compelled the German High Command to weaken the German forces on the Western front and hurry reinforcements to the Eastern front: those two famous Army Corps which made their absence so painfully felt to the Germans at the Battle of the Marne. As long as the ammunition of the Russian Army was at all comparable with the resources of the enemy it stood up to the German offensives and it invariably defeated the Austrians. During the course of 1915 the Russians drew the main weight of Germany's offensive on themselves and gave the Western Powers a breathing space. As long as Germany was tied down in the East she had to remain on the defensive in the West.

As a result Germany finally lost her chance of a decisive offensive in the West. Great Britain and France were able to rally their reserves and develop their war potentials. That was the real contribution of Russia to the Allied cause. The most recent and the best German history of the World War[1] now admits that even after the German successes in 1915 in Galicia and in Poland the Russian Army was not decisively defeated. In 1916, as the same German history points out, the Russian Army was in a position to launch the Brussilov offensive and bring about the collapse of the Austro-German front, and the effects of this offensive are compared with the disastrous results of the Battles of the Somme and Verdun for Germany.[2] In 1917 Russia collapsed, but to-day German war histories recognise that the causes of this collapse were not purely military, and they also admit frankly that Germany did not win one decisive victory on the Eastern front; not the famous Battle of Tannenberg, not the successful campaign of February 1915 against the X Russian Army, not the big German victories in Galicia and Poland in 1915.[3]

The admission of these facts by the Germans does not by any means gloss over the weaknesses of the Russian Army during the World War, or whitewash the total bankruptcy of the Russian Army leadership. However, despite these weaknesses the Russian Army displayed very considerable powers of resistance, and Germany was never at any time in a position to win a decisive victory against Russia. The World War proved that Russia possesses certain permanent defensive factors. However, in the World War she had little to rely on apart from these rather primitive factors: numerical strength, the endurance of the Russian infantryman, and the advantage of an enormous area of operations.

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[1] "*Landkriege*" in the "*Handbuch der neuzeitlichen Wehrwissenschaft*", Berlin 1936, Vol. I, p. 417.

[2] Ibid., pp. 421 and 430.

[3] Ibid., pp. 408, 411 and 443.

And the manner in which Tsarist Russia prosecuted the war largely robbed these factors of their effectiveness. The World War was certainly for Russia what it allegedly was for Germany according to General Hoffmann's famous phrase: a war of lost opportunities. The objective military possibilities of Russia in the World War can be estimated (and at the same time the enormous military possibilities of the Soviet Union to-day) only if the disastrous incompetence of her leadership is taken into consideration. No foreign criticisms approach in severity and ruthlessness the criticisms of prominent representatives of the old Russian Army.

The catastrophe dates back to pre-war days. Military credits in the sum of several hundred million roubles remained unused on the credit account of the War Ministry up to the outbreak of hostilities. Many orders for war material were afterwards cancelled by the Russian War Minister Suchomlinov, who also cut down artillery supplies by three-quarters. And at the beginning of the World War the material assistance immediately offered by the Western Powers was rejected. Before the outbreak of hostilities the defensive works along the Vistula were demolished, and the material basis of the advanced theatre of war in Poland was either directly destroyed or neglected. In addition the military concentration plan was weakened. All this was done in direct contradiction to the military obligations which Russia had undertaken towards her ally, France.[1]

The Russian preparations for war were worthy of its subsequent prosecution. The Russian Army entered the World War with very inadequate technical equipment; it had about

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[1] Kokovtsev (Former Russian Premier), "Memoirs" (Russian), Paris 1934. General Holmssen, "The World War" (Russian), Paris 1935, p. 12. General Sayontchovski, "The World War" (Russian), Moscow, 1929, p. 377.

100 heavy guns as compared with 1,000 in the German Army. Russian munition supplies lasted for a few months only, and General Golovin declares that the catastrophe caused by supply shortage began in the fifth month of the war. Only half the number of rifles required were available. Only a part of the men in the line were actually armed with rifles and the rest waited for the death or incapacity of their comrades in order to take over their rifles. The situation became so bad that an attempt was even made to arm whole companies of men with axes. Russian industry was able to produce only about one-fifth the ammunition actually required. In 1917 the Russian Army had only 12% of the normally requisite number of machine-guns. During the course of the war it received only 25% of the field artillery required even according to its own low norms, and not more than 12% of its heavy artillery requirements. For instance in February 1915 at the time of the second German offensive in East Prussia the front line of the 53rd Division had 50 field guns for which it received 4 shells per battery daily.[1]

The German war historian Frantz speaks in his book "Russia's Entry into the World War" of "the well-forged sword of Russia", but this is totally untrue; the Russian war sword was, in fact, not only blunt, but full of very serious flaws. Russian strategy was even worse. The German High Command knew from the beginning that the Russian General Staff had no intention of launching any serious offensive. General Staabs writes:

> "The Russian General Staff did not dream of launching a rapid and daring offensive even against obviously weaker German forces."[2]

The proposed preliminary Russian offensive was not seriously prepared, and General Golovin writes:

> "The weakest point in our deployment was the relative weakness of the forces used for striking the first strategic blow."[3]

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[1] General Golovin, "The Russian Army in the World War", Newhaven 1931· General Holmssen, "The World War " (Russian), Paris 1935, p. 76.

[2] General Staabs, "*Der Aufmarsch nach zwei Fronten*", Berlin 1925, p. 74.

[3] General Golovin, "Our War Plan" (Russian), Paris 1936, p. 25.

Russia's strategy during the World War was even inferior to her very backward military technique, both in Galicia and in East Prussia. Referring to Russian strategy at the Battle of Tannenberg, Svietshin declares:

> "The indecisive and vacillating offensive, retarded at the critical moments of the battle, gave the enemy very favourable chances. So much for Samsonov's invasion of East Prussia."[1]

From Ludendorff's memoirs we know that the Russian Army was within an ace of victory at Tannenberg, and that it was only the failure of Rennenkamp to join issue (the Germans expected him to) which saved Germany from defeat and gave her an unexpected victory. In Galicia the Russian victory was insufficiently developed and followed up. Svietshin writes as follows on this point:

> "The operative leadership of Alexiev in Galicia in 1914 was even worse. The strategic situation offered these operations a magnificent objective; the encirclement of all the Austrian armies by a double enveloping movement of our two wings. But General Alexiev concentrated all his attention on reducing his risks, and he let his flanks advance only slowly and by stages. Such methods were good enough to win very ordinary successes and to drive the Austrians out of Eastern Galicia, but their adoption excluded any idea of a campaign aiming at Vienna or Berlin."[2]

The Brussilov offensive in 1916 also failed to attain its objectives, and in his memoirs General Brussilov describes how his operations were sabotaged and isolated by his neighbour, the Commander-in-Chief on the Russian West front, General Everth. Russian strategy during the World War was proficient neither in offence nor defence, and it represented an unusual mixture of adventurousness and vacillation. Without being able to utilise its offensive chances it wasted its reserves in 1914 and thereby rendered a successful defensive campaign in 1915–16 impossible.

One failure of the Russian Army leadership must be particularly stressed: its failure in the sphere of military coalition; its failure to carry out the Franco–Russian Military Convention. Important Franco–Russian General Staff discussions took place in 1911–13, and a joint war plan was drawn up. During these discussions the Russian General Staff undertook to launch a preliminary offensive against Germany which it was not in a position to conduct and which it did not, in fact, intend to conduct. It was a piece of deception without parallel in the history of military diplomacy. Russia's military undertakings towards France provided for a vigorous offensive along the shortest line to Berlin. However, Russia's real war plan not only failed to detail any troops for this offensive, but prepared for an immediate withdrawal of all Russian troops from the whole area of Russian Poland on the left bank of the Vistula. In 1910 the location of Russia's military forces was altered with a view to defensive warfare, and the greater part of the troops on the West frontier were withdrawn into the interior. Russia's real war plan was in contradiction to the joint war plan drawn up with France. Referring to Russia's chief representative at the conference of the two General Staffs, the Chief of the General Staff, General Shilinski, General Golovin declares that he was not even acquainted with Russia's real war plan and that he provided the French with fantastic information. At the conference of the two allies in Paris on July 13th, 1912, General Shilinski declared:

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[1] Svietshin, "Strategy" (Russian), Moscow 1927, p. 207.

[2] Ibid., p. 175.

> "The Russian General Staff has decided to concentrate an army of at least 800,000 men against Germany. Offensive operations are to begin on the fifteenth day after mobilisation."[1]

As a matter of historical fact, Russia was able to put only 550,000 men into the field on the fortieth day after mobilisation. There was no trace of any practical joint plan of operations with the French, and writing later the Quartermaster-General on the Russian General Staff, General Danilov, declares:

> "I never heard that the question of drawing up a joint plan of operations was raised during the discussions between the Chiefs of the General Staff."[2]

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[1] According to the Protocols of the negotiations conducted between the two General Staffs published as an annexe to the Memoirs of Suchomlinov printed in Russian in Berlin 1924, p. 209.

[2] General Danilov, "Russia in the World War 1914–15", Berlin 1924, p. 111.

When war actually did break out, the Russian General Staff did not carry out its own war plan and it made no attempt to carry out its undertakings to its ally. It launched an offensive in East Prussia earlier than it had originally intended, but with insufficient forces, and far less than it had promised. And its conduct of this operation was pitiful. At the beginning of the war General Shilinski, whose irresponsibility was partly responsible for paving the way to the catastrophe of Tannenberg, appeared as Commander-in-Chief of the North-West front, and it was under his command that the Russian Army was smashed at Tannenberg.

3. THE RED ARMY AND THE COLLECTIVE SECURITY BLOCK

Since the days of the World War Russia has gone through a complete revolution as a military power. Her heavy industry is five times as strong as it was; her engineering industry is almost twenty times as strong; and the increase in the strength of her war industries is even greater still, though it is not possible to make any exact calculation in this respect because the factor of quality plays a role as well as quantity. The Soviet Union has opened up enormous natural resources and her war potential is undoubtedly stronger than that of the two Western Powers together. For this reason the Soviet factor in a European defensive coalition is given a new significance, and one which is probably decisive.

Above all, the Red Army would possess the greatest volume of armaments in such a defensive coalition. Its effectives are about three times as strong as those of the French and British armies put together (reckoning the armies of the Western Powers at present stationed in Europe). As the Red Army is at least as well equipped per unit as the armies of the Western Powers, and in some respects even better equipped, we may assume that its volume of armaments (in accordance with its numerical superiority) is also greater, and that on mobilisation, on the raising of armies at full war strength, it will be at least twice as strong as the armies of its biggest allies. This seems quite certain, particularly in view of the fact that the war preparedness of Soviet industry is considerably greater than that of the industries of the Western Powers.

The Red Army would also represent the most powerful weapon of offence within a European defensive coalition, because it possesses the most powerful concentration of the most important modern weapons of offence: war planes and tanks. That need surprise no one, because for a long period the Western Powers were one-sidedly bent on disarmament and the defensive, and as a result they neglected the development of offensive weapons. The far-reaching superiority of the Red Army in modern weapons of offence is readily understandable when we remember that its re-equipment aimed at providing the troops with the highest possible norms of war planes and tanks, and that its tactical principles lay down the greatest possible use of aeroplanes and mechanical weapons. The productive capacity of the Soviet aeroplane and tank industries is several times as great as that of the Western Powers. It is only necessary to compare the figures quoted by us previously from Louis Bréguet concerning the respective productions of the Soviet and French aero-industries. We may safely assume that the number of modern weapons of offence in the hands of the Red Army is three times as great as the respective armaments of the Western Powers.

This distribution of armament strength is of very great importance for the politico-military situation of Europe. The backwardness of the Western Powers in armaments and war technique, particularly in quantity, has greatly increased the relative importance of Soviet armaments not only as a counterweight to German armaments, but also as a factor within a European defensive coalition.

The Red Army would also be the primary representative of offensive strategy within a collective security block. The powerful concentration of offensive weapons at its command gives it an instrument of unique strength. In comparison with 1914, when as far as Russian strategy considered the possibility of an offensive at all it was building on sand, the Red Army of to-day has war material which permits it to envisage far-reaching offensive operations on a European scale. Further, the Red Army is the only army which is in a position to answer a German attack with an immediate and carefully-prepared counter-offensive. Amongst the armies of those European Powers interested in peace it is clear that the monopoly of offensive strategy is in the hands of the Red Army. Great Britain, for instance, cannot in her wildest dreams consider the possibility of independent offensive strategy in land warfare, and even France has taken up a defensive opening, and the preliminary operations of her Army must necessarily be defensive.

And finally, it is the Red Army which represents the principle of an active coalition policy, and demands a uniform and co-ordinated prosecution of coalition warfare. This principle is doubly in accordance with the character of the Red Army. In its construction, development and strategy the Red Army is based on the most thorough "planned economy" in the widest sense of the term.

The leadership of the Red Army transfer the principle of "planning" to the sphere of international military policy with a view to preparing joint action against the aggressor. In addition, from the standpoint of war technique the Red Army is an instrument of the highest value for a coalition policy. It possesses a shock army consisting of a strong air arm, tank corps, air infantry, motorised infantry, modern cavalry and powerful artillery; it is a shock army which combines the virtues of utmost mobility with great fire-power and break-through force. It is indeed an instrument admirably suited to the rapid and offensive prosecution of any military operations which might be undertaken as a result of an alliance against German aggression.

With this the positions have been exactly reversed since the pre-war period, because the demand put forward to-day by the Red Army for the careful preparation and swift prosecution of a strategic offensive and for the organisation of combined efforts on the part of the Allied Powers to overthrow the enemy, is precisely the demand put forward by the French General Staff before the World War. At a conference of the two General Staffs which took place in Kraznoya Selo (then Tsarkoya Selo) on August 31st, 1911, General Dubail, the Chief of the French General Staff at the time, declared:

> "In order to make success certain Germany must be attacked simultaneously from the West and from the East. . . .
>
> "The effect of this offensive will be heightened if it is conducted as swiftly as possible, with the strongest possible concentration of forces, and along the most dangerous line for the enemy."[1]

At the subsequent joint conference which took place in Paris on July 13th, 1912, France was represented by the new Chief of her General Staff, General Joffre, who declared:

> "The plan of the allies is thus to attack from both sides simultaneously, and to bring the maximum of their combined efforts into play. . . .
>
> "We must try at all costs to destroy Germany's forces; it is important that the time necessary for the mobilisation and concentration of the allied armies should be reduced to a minimum."[2]

And this arrangment is repeated in the protocol of the joint conference which took place in August 1913:

> "The plan of the allies is to consist of attacking the enemy from two sides simultaneously, whereby the maximum efforts of both allies must be developed."[3]

These principles were regarded as a matter of course, as axioms of coalition warfare. Even the incompetent Russian General Staff did not dare to reject them openly, although it had no desire to put them into action and although to a certain extent it was not even in possession of the means to do so. The World War mercilessly revealed the deficiencies in the prosecution of coalition warfare by the Allied Powers, and confirmed the necessity for the utmost co-ordination of operations and efforts in the pursuance of any joint war plan. The idea of a joint war plan, co-ordinated efforts, and the strict prosecution of coalition warfare is vigorously supported by the Red General Staff, whereas the leadership of the Tsarist Army either sabotaged the idea or proved incapable of carrying it out. The leadership of the Red Army, on the other hand, is determined to fulfil all its obligations, and it possesses the military technical resources necessary to do so. The Red Army would represent not only a powerful military factor within a European defensive coalition, but also a powerful centre of attraction for the assembly of coalescing forces.

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[1] According to the Protocols of the negotiations published as an annexe to the Memoirs of Suchomlinov, Berlin 1924, pp. 203–4.

[2] Ibid., pp. 208 and 212.

[3] Ibid.

4. THE RED ARMY AND EASTERN EUROPE

The significance of the Red Army in a European defensive coalition, and the strategic functions it would have to perform towards the component parts of such a coalition would vary according to the respective positions of the members of the coalition in the event of a German attack. Despite the Munich Agreement, the shadow of an invasion in force still hangs over Eastern and South-East Europe. The military superiority of National Socialist Germany over the countries threatened is beyond all question, and a strategic variant whereby Germany would leave a strong defensive force in the West whilst launching a powerful offensive against Eastern and South-East Europe is quite on the cards, in fact the Munich Agreement has increased its likelihood. Whilst the danger of German invasion has actually been increased by the Munich Agreement, the strategic position of the threatened States has greatly deteriorated. Poland and Roumania (and to a lesser degree Yugoslavia) are no longer protected by the existence of a vigorous and independent Czechoslovakian State. Germany could now attack Poland from the South, from Slovakia and Ruthenia. And in the same way she could now attack Roumania. Thus, objectively speaking, the need of these countries for Soviet support has greatly increased. Apart from material supplies, raw materials, etc., they would now need actual war materials, which Roumania previously obtained from the Skoda works. In addition, they would urgently need direct military assistance, and it is quite wrong to imagine that Soviet supplies and the Soviet air arm alone would prove sufficient to enable Poland and the countries of South-East Europe to withstand a German invasion. Only the full use of the entire military strength of the Soviet Union would prove sufficient to hold up a German rush and develop the check into a decisive defeat. The countries of South-East Europe can be effectively defended only by the direct territorial junction of their armies with the Red Army acting as the main body of a great defensive coalition against German aggression in Eastern and South-East Europe.

The intervention of the Red Army would fundamentally alter the strategic position of the Eastern and South-East European States. Their strongest cards are their man-power and their territorial extent. They are not high enough to neutralise the war-technical superiority of National Socialist Germany, but in co-operation with the highly-developed war technique of the Soviet Union they could be played out to their full strength.

The difficulties here are both political and strategic. As a result of the Munich Agreement both the Little Entente and the Pact of Mutual Assistance between Czechoslovakia and the Soviet Union may be considered as no longer in existence. The protection afforded the countries of South-East Europe by the Czech defensive line no longer exists, and the only alternative protection available is that of the Red Army, the one powerful army on the spot. The countries of Eastern and South-East Europe occupy an area of great strategic importance, and one which, in the event of a German attack, would readily lend itself to the organisation of a successful counter-offensive. Consider, for instance, the importance of Polish Pomerania for the Baltic coasts of Germany, the importance of Posen and Polish Upper Silesia as a base of air operations, the importance of the Transylvanian Alps against a Hungary become ally of Germany, and consider finally the still-existing importance of Czechoslovakia, which, although she has ceased to count as an active military factor, still occupies a strategic position of great importance. None of the countries in question can utilise the advantages of its position on its own, owing chiefly to a lack of offensive weapons. Just as the Red Army is the only power which can effectively defend these countries against German aggression, so the Red Army is the only power which, thanks to its war technique, its powerful offensive weapons and its great numbers, could effectively utilise their favourable strategic positions to ward off a German attack and secure victory for a European defensive coalition. Co-operation with the Red Army is the only possibility open to Poland, Roumania, etc., to play an effective role in a European defensive coalition against German aggression and to share in its final victory.

5. THE RED ARMY AND WESTERN EUROPE

The importance of an alliance with the Soviet Union for the Western Powers is determined by the character of their war potentials. Great Britain and France have one thing in common in this respect: although they both have strong economic and industrial potentials their level of militarisation is comparatively low, and they both lag far behind National Socialist Germany in war preparedness. The deadly danger for them will arise at the very beginning of the war when National Socialist Germany is doing her utmost to utilise the more rapid deployment of her forces in a smashing concentric blow. A surprise attack at the very beginning carried out with the enormous mobility of modern warfare by National Socialist Germany with the full force of all her accumulated war material and of her already mobilised industries will threaten the two Western Powers with immediate disaster.

General von Metzsch writes:

> "There is no doubt that the opening of hostilities in 1914 will be put far into the shade in respect of the mobility and rapidity of deployment."[1]

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[1] General von Metzsch in "What would be the Character of a New War?" issued by the Inter-Parliamentary Union, Zurich 1932, p. 26.

And General Groves, the leading British authority on air warfare, has expressed the opinion that the first stage of a new war might very easily prove its decisive stage.[1] There is therefore a very real danger that despite their superior economic potential, Great Britain and France might receive a fatal blow before they were able to raise mass armies and place their industries on a war footing. Superior economic potential will be useless if the aggressor can bring such tremendous military strength into play at once that his opponents have no time to mobilise their economic resources for war. The need of the Western Powers for military relief against an attacking Germany, their need for military assistance from their allies, is much greater to-day than it was in 1914 because the danger of their being overwhelmed is much greater and more urgent. In the event of war the Western Powers will urgently need the military assistance of a big power which has fully-developed war potential, and which is in a position to proceed offensively against an aggressive Germany from the very first moment of the war. The only country in the world which could do this is the Soviet Union, certainly not the U.S.A., because although the U.S.A. is still the most powerful economic unit in the world, her military preparedness is very limited. The value of an ally in the next war will be measured by the degree to which it is able to launch vast resources and a mass army into the arena at once. Only the Red Army is in a position to do this. The Western Powers can obtain effective military assistance only from the one power which is in a position to restore the balance of military power in Central and Western Europe as it existed before the enormous armaments of Nationalist Socialist Germany changed it in favour of the aggressor.

In March 1935 the former French Air Minister Pierre Cot, a leading member of the Radical–Socialist Party, wrote as follows concerning German re-armament and French defence:

> "We have lost. But we have won more than we have lost, because the support which the Soviet Union can give us is much

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[1] General Groves, "Our Future in the Air", Harrap, London 1935.

greater than the danger which threatens us from German re-armament."[1]

The military support which the Soviet Union will be in a position to afford the Western Powers in the event of war will be doubly important.

In the first phase of the war a vigorous offensive by the Red Army on land and in the air would relieve and improve the critical defensive situation of the Western Powers. The first phase of the next war will undoubtedly unroll as a parallel drive towards the West: the German Army against France and her allies, and the Red Army against Germany. A rapid offensive on the part of the Red Army holding big German military forces in Eastern Europe and rolling back the German front would give the Western Powers the utmost support that any military alliance could possibly offer them.

The support afforded at the beginning of the war by the Red Army would also give the Western Powers a chance to develop their war potential and put their industries on a war footing. Relieved of pressure by an offensive of the Red Army in the East, they would be able to make up for lost time and neutralise Germany's advantage in war-material supplies. The economic potential of the Western Powers is greater than that of National Socialist Germany, particularly in finance and raw materials, and their industrial potential is also greater than Germany's: in 1935 the combined production of Great Britain and France in motor vehicles of all kinds was three times as great as Germany's, and the combined productive capacity of the two powers with regard to aeroplanes is also greater than Germany's. The military support afforded them by the Red Army would permit the Western Powers to develop their economic war strength and increase their military offensive powers.

6. THE RED ARMY AND FRANCE

The raising of a mass army at full war strength will take longer in France to-day, in accordance with the present structure of her army, than it did in 1914, and it will require several months. The experience of the World War shows how much time was necessary to put French industry on a war footing, and how slowly the production of war materials developed. In 1915, in the second year of the war, French factories turned out only 1,010 75-cm. field guns, as compared with 5,460 in 1917. In the second quarter of 1915, i.e., almost a year after the beginning of hostilities, they turned out only 55 of these highly-important field guns, as compared with 2,080 in the second quarter of 1918. These figures show how small a fraction of objective war requirements could be satisfied in the first year of the war, and what little and what little and what slow progress the production of war materials made. The same is true of aeroplane production.[1] In the World War France had time to develop her war production because Germany also entered the war without having previously put her industries on a war footing. The struggle of the French Army for the strategic initiative began only in 1916, and the transition to the offensive only in 1917. These two factors, the relative slowness with which war-material production developed, and the comparatively late date at which the French Army began serious offensive operations, were closely connected with each other.

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[1] In "*L'Œuvre*", March 13th, 1935.

In future wars the periods will have to be greatly shortened. France will be able to neutralise Germany's lead in war-material accumulation and production only by pursuing an active coalition policy, and this is truer than ever now that Czechoslovakia has been eliminated. The value of her allies in the event of war will be determined by two circumstances: by the effective support they can give to her defensive struggle in the early stages of the war, and by the maximum support they can give her later when she takes the offensive. Only a country able to launch a mass army with modern equipment against National Socialist Germany can be of assistance to France in this respect.

Let us examine the French system of alliances from this standpoint. Neither Poland nor any of the countries of the

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[1] Reboul, "*Mobilisation Industrielle*", Paris 1925, pp. 39 and 104.

Little Entente come into question here: National Socialist Germany is superior in war technique to all of them. The Little Entente and Poland were quite able to give France valuable flank support against a disarmed Germany, but they are not in a position to offer her any real assistance against a heavily-armed Germany.

Great Britain is also not in a position to give France any decisive assistance on land, and certainly not in the critical opening stages of the war. Paul Reynaud, one of the most authoritative of French politicians in military matters and a passionate upholder of the Entente with Great Britain, realises quite clearly how very limited is the assistance Great Britain could afford France in a land war, and he writes:

> "The slowness with which Great Britain's re-armament is going forward, particularly with regard to her land forces, does not permit us to regard the support which she may give us as a sufficient guarantee for our national safety in the event of a lightning war."

The formulation is polite but clearly sceptical, and it expresses French anxiety at the weakness of British military effectives, at the backwardness of British re-armament and the slowness with which Great Britain is developing her war potential.

A French journalist discusses the possibilities of British military assistance for France in the event of war in the following trenchant terms:

> "Great Britain is very weak in military technique and what war material she does possess would have only a very limited effect in a European conflict. If war were to break out to-morrow, then the first expeditionary force that Great Britain could send to France could hardly exceed 100,000 men. . . . As in 1914, the French would have to foot the first bloody bill of an invasion. We must not forget these costly lessons of the past, and the British should not forget them either. We shall be in the thick of the fight when they are beginning to think of buckling on their armour. This prospect is disturbing."[1]

The observations of one of the greatest leaders of the British Army during the World War, the late Lord Allenby, confirm the French standpoint. Writing in 1935 concerning the condition of the British Regular and Territorial Armies and of the first prospects of British war production, he declared:

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[1] In the "*Paris-Soir*", November 23rd, 1936.

> "The Home Forces could not provide the same number of Divisions for an Expeditionary Force they did in 1914. The major portion of our tank units would operate with tanks whose value in war time would be very problematical. Our Regular Army, consisting of only four or five Divisions, would be able to do no more than 'mark time' for awhile. And as for the Territorial Army, its effectives are 30% weaker than they should be theoretically, and 50% weaker than they were in 1914. The Regular Army suffers from a shortage of war materials, but the position of the Territorial Army is much worse. Up to now it has not got a single tank. Under existing conditions it would take several months before a single Division of the Territorial Army could be fully equipped and provided with sufficient reserves. . . . The number of firms in this country which would be able to start producing war material immediately on the outbreak of hostilities could be counted on the fingers of one hand. On the day after the declaration of war their combined production would hardly be sufficient to provide even a small part of our Regular Army with the supplies it would need."[1]

Certainly, since 1935 efforts have been made in Great Britain to increase war-material production and the Army Reform scheme announced in the House of Commons on March 10th, 1938, by the Secretary of State for War, Hore-Belisha, promises a considerable increase in the mobility, motorisation and fire-power of the British Army. However, despite these improvements, the state of the British Army in 1935–38 (small, almost without trained reserves and with very inadequate offensive weapons) makes it almost the opposite of what France will need in the way of military assistance during the next two years in the event of a lightning and concentric German attack. According to the White Books of February 1937 and March 1938 the British Army is to receive modern weapons, but its effectives are not to be increased, and during the next few years only two more tank battalions are to be raised. In the critical years 1939–40 therefore there is no hope of any strong British expeditionary force or of any powerful British shock army coming to the assistance of France.

[1] In "*Le Journal*", December 30th, 1935.

The opinion of Germany's military experts on the point is interesting:

> "The British Army is not to benefit much from the latest armament measures. That will not matter very much if the course of the next war is similar to that of the last. But should it prove to be different, then there would be danger of Great Britain's mass army coming on the scene too late."[1]

The above comment is particularly illuminating taken in conjunction with our knowledge that National Socialist Germany is straining every nerve to ensure that the next war will not, in fact, proceed along the same lines as the World War.

France can hope for effective military support at the beginning of the war only from an ally whose war potential is already highly developed, and who has a mobile mass army with powerful modern weapons of offence—that can only be the Soviet Union and its Red Army. Amongst all France's allies the Soviet Union is undoubtedly the one which can offer her the most effective and the quickest support, which can strongly support the preliminary defensive position of the French Army and guarantee most effectively the further development of France's potential for military offensive. The French Army with its strong defensive position, its brilliant military traditions and its great powers of endurance, and the Red Army with its strong offensive position, its powerful offensive weapons and its strategic élan complement each other admirably. "It will be impossible to defeat a country which is allied with the Soviet Union," declared Pierre Cot.[2]

7. THE RED ARMY AND GREAT BRITAIN

Germany's powerful re-armament tends objectively towards the establishment of closer relations between Great Britain and the Soviet Union as between one military power and another. The realities and necessities of the Franco–

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[1] In the "*Handbuch der neuzeitlichen Wehrwissenschaft*", Berlin 1937, Vol. II, p. 258.

[2] In "*L'Œuvre*", November 4th, 1935.

Soviet alliance are self-evident, but it is often overlooked that Great Britain and the Soviet Union are also presumptive military allies, and this fact is of tremendous importance for Great Britain's military policy. The traditional aloofness of British foreign policy from the Soviet Union, and its general uncertainty tend to cloak this inevitable development.

At the same time, Great Britain is also very much dependent on the military assistance the Red Army could afford her as an ally.

Great Britain needs the assistance of the Red Army primarily because she is a country with a weakly developed war potential. In this respect Great Britain requires assistance even more urgently than France. She will require more time than France to adapt her industries to war production because in peace-time her war industries are not so strong as the French. Above all, she will require far more time than France to raise a mass army—in fact an army of any sort on a war footing—because she has practically no trained reserves. Further, as a belligerent power she will benefit fully from the assistance given to France by the Red Army. In the event of war French territory will be the field of operations for the British Army, and its strategic position will depend on the military situation of France. Great Britain's own security depends on the military security of Northern and Eastern France, and therefore the fact that strong German forces will be held in Eastern Europe, that Germany will be threatened and perhaps defeated in Eastern Europe, thus relieving the pressure on France, must also improve the military situation of Great Britain and give her some prospect of victory. Victory for Great Britain may very easily be won on the Oder or the Elbe.

In another respect, too, Great Britain is very dependent on the assistance of the Red Army owing to her own air position and the given conditions of modern air warfare. The primary danger to Great Britain is from the air, and that danger is incomparably greater to-day than it was during the World War. A British defeat in the air might have disastrous consequences. The Commander-in-Chief of the British Air Force, Air Marshal Sir John Salmond, wrote as follows:

> "Germany's productive capacity (in the aero-industry) is considerably greater than ours. We must avoid an armament race because unless we adopted emergency measures such as the requisitioning of aeroplane factories, we should risk being shamefully beaten."[1]

And General Groves has also expressed a very pessimistic opinion about the situation in which Great Britain will find herself in the next war owing to the superior strength of the German Air Force:

> "The upshot of the whole matter is that we are to-day weaker than Germany in the air. The nation has, in fact, been educated away from the truth. If our navy had declined even to second place there would have been a public outcry. But our descent to sixth air power is only now beginning to create alarm "[2]

He then deals with the increasing importance of the modern air arm and the consequences which arise for Great Britain as a result of her weakness in the air:

> "It has consequently deprived us of the inestimable advantage of our insular position, and therefore eliminated the time-factor which has in the past always enabled us to develop our defensive resources. For this reason we can no longer count upon the assistance of the Dominions in the first, and very possibly decisive, phase of a European conflict. Failing adequate air defence, this country is liable to suffer defeat in a major war, and the whole Empire thus be shattered by a decisive knock-out blow at its heart."[3]

British re-armament in the air began in 1936, and although it has undoubtedly strengthened the defensive position of the country, it will not be materially completed before 1940. The reorganised British Air Force has not yet thoroughly mastered its new air material, and in the meantime the air arm of National Socialist Germany is growing stronger at a still more rapid pace.

This situation makes it imperative for Great Britain to seek the support of the strongest air force on the continent.

[1] In "*Le Journal*", September 9th, 1935.

[2] General Groves, "Our Future in the Air", Harrap, London 1935, p. 111.

[3] Ibid., p. 67.

This air ally is not France, whose chief importance for Great Britain will be on land, but the Soviet Union. The strength of the Soviet Air Force and its significance for the allies of the Soviet Union are recognised without cavil by General Groves, who writes:

> "With the largest air force in the world Russia now ranks as a first-class air power. . . . It seems equally certain that if Russia had not become a first-class air power her voice would carry less weight than it does at present in the councils of Western Europe. France has been quick to appreciate that the Soviet air fleet would enable Russia to co-operate with her quickly and effectively; Germany has been no slower to realise that it enables its Eastern neighbour now to do what, to her great disadvantage, she has never been able to do before, namely to strike a lightning blow. . . . Berlin and Western Germany are, of course, well within her range."[1]

France, as an ally, quickly grasped the significance of the Red Air Force. Germany, as an enemy, fears it. Will Great Britain realise and take her military chance in time, the chance created by the fact that the superior air power of the Soviet Union can hold the German arm in check? In the air Great Britain has not even the slender natural advantage of France. London is not like Paris, it is not divided from Germany by a fairly large stretch of countryside which can be organised into an armed air-defence district with alert observation-posts. Nothing but the sea separates London from Germany. The well-known French expert on bombardment from the air, Rougeron, declares in his latest work[2] that the sea offers no protection whatever against air attacks, and that from this standpoint a coastal town is in the same disadvantageous position as a frontier town, London, for instance, being no better off in the matter of air attack than Strasbourg. German foreign policy speculates on this air vulnerability of Great Britain, and at a public meeting the Gauleiter of Essen, Terboven, declared quite openly:

> "During the days of the September crisis Field-Marshal Goering's powerful air force was ready at a moment's notice to con-

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[1] General Groves, "Our Future in the Air", Harrap, London 1935, pp. 50–55.

[2] In the "*Revue Militaire Générale*", October 1938.

vince the people of Great Britain that the days of 'splendid isolation' have gone for ever."

It is obvious therefore that the importance of a powerful allied air force which could keep the air force of the enemy occupied and tie it down to its own territory, is even greater for Great Britain than for France. In the next war the Red Air Force will defend not only Paris, but also London.

The conditions of modern air warfare peremptorily demand that the Franco–Soviet alliance should be extended into a regular Paris–London–Moscow entente. However, an Anglo-Soviet military alliance would have an even greater strategic significance than the defence of Great Britain from the air; the respite which the Red Army could give the Western Powers would permit the development of Great Britain's air and land forces into a serious offensive factor.

The situation for Great Britain in the Far East demands this alliance even more peremptorily. The relation of forces for the British Empire is least favourable of all there. The weakest point of the British Empire lies between the Indian Ocean and the Pacific, where the threat comes from Japan. Great Britain has no military forces worth mentioning there, and only very weak naval forces. The only military power in the Far East which could call a halt to Japanese expansion in Eastern Asia is the Special Far Eastern Army of the Soviet Union.

8. HOW MUCH ARE ALLIANCES WORTH TO THE RED ARMY?

Pacts of Mutual Support represent the best chance for the peace of the world; they are intended to intimidate the aggressors. And should aggression take place nevertheless they would give a coalition of peaceful powers the best chance of victory.

The advantages which allies of the Soviet Union would obtain from an alliance are self-evident: the certainty of successful defence, and in the upshot certain victory. Without an alliance with the Soviet Union the possibility of victory over National Socialist Germany would be a very problematical one for the Western Powers owing to the relative weakness of their offensive weapons.

Naturally, military alliances are advantageous to the Soviet Union too. The diplomatic representatives of the Soviet Union, and the leaders of the Red Army offer real alliances which have been previously prepared in every detail. Voroshilov and Shaposhnikov are using the same language as the Chiefs of the French General Staff, Dubail and Joffre, used before the World War, and they take up the same attitude. In the event of German aggression they want to ensure the maximum of co-ordinated effort to defeat the enemy, and they want it on the basis of a new and incomparably more effective technique of warfare. However, the advantages of military alliances to the Soviet Union are not quite the same as those of the Western Powers: for the Western Powers it is a question of taking advantage of the decisive chance; for the Soviet Union it is a question of a supplementary chance of victory only. Military alliances give the Soviet Union an absolute certainty of victory. The Soviet Union is militarily superior to National Socialist Germany. Military alliances would increase this superiority considerably. Even assuming that with the assistance of allies or by an enormous effort of her own, National Socialist Germany could obtain even temporary equality with the Soviet Union in military power, it is quite clear that this would be of no avail if the Soviet Union were a member of a coalition, and if Germany were simultaneously engaged on other fronts. The military alliance with France is of particular importance because France is within striking distance of Germany's vital economic centres, and any successful French offensive would threaten Germany with collapse. However, over and above this, the alliance with France is important for the Red Army because the Franco–Soviet defence block represents the strongest concentration of military strength in Europe, a concentration which is stronger than any other possible European combination. Further, alliance with

France gives the Red Army the certainty that victory will be obtained quickly. That is why the military leaders of the Soviet Union insist on the greatest possible co-ordination between the allied armies, and a uniform prosecution of the war by means of a joint war plan. Colonel Oehmichen, a French military historian, declares that the World War was unnecessarily lengthened by the failure of the Allied Powers to organise its joint prosecution effectively.[1] The leadership of the Red Army is therefore very anxious to avoid any such mistakes in the next war.

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[1] Colonel Oehmichen, "*Essay sur la doctrine de guerre des coalitions*", Paris 1927, p. 101.

CHAPTER XIII

POLAND BETWEEN TWO CAMPS

I. POLAND'S MILITARY STRENGTH

AFTER THE GREAT continental military powers, the Soviet Union, Germany and France, Poland is next in importance for the alignment of forces and the military position in a European war. It is not so much a question of Poland's military strength as of the strategical importance of Poland's territorial position. The whole World War as far as it took place on the Eastern front was fought out within the frontiers of what is now Poland. The territorial features of Europe have not altered since the World War, and whether Poland enters the next war on the side of Germany or on the side of a European defensive coalition will make no difference to the fact that the decision in Eastern Europe will be fought out on Polish territory.

Poland's situation between Germany and the Soviet Union has become critical since she began to act as an auxiliary to National Socialist Germany. Poland's security was formerly based on German disarmament, on her alliance with France and on the League of Nations as an arbitrator in European affairs. That security no longer exists. Poland would be helpless in face of the overwhelming military strength of Germany without the military support of France and the Soviet Union. Despite this, the diplomats of Warsaw have worked tenaciously against the Franco–Soviet alliance. The hope of establishing a military alliance with Poland persuaded Germany to launch an active policy of conquest in Eastern Europe. The whole of Eastern Europe has been undermined, and Poland herself is directly threatened.

At the same time her military situation is steadily deteriorating. She is situated between the two strongest military powers in continental Europe, and it must be borne in mind that the difference in war strength as between the strong and the weaker powers is becoming increasingly great. Seven or eight years ago Poland's military situation between her two great neighbours was more or less tolerable. As against a Germany which had not yet re-armed Poland had her bigger effectives and her larger number of trained reserves. Germany's powerful industrial potential for war purposes was made up to some extent by Poland's freedom to arm. Before the industrialisation of the Soviet Union the Polish Army was more or less on the same technical level as the Red Army; there was a possibility of comparison in equality. However, in a decade the situation has completely changed. Germany's powerful re-armament and the modernisation of the Red Army make Poland's military position hopelessly weak. The more Poland's relative strength towards her two powerful neighbours declined, in 1933–38, the more ambiguous Polish foreign policy became, and in consequence the more tense the position in Eastern Europe. Poland is developing into an area of high pressure: the strongest concentrations of military strength ever seen in Europe are massing on her Western and Eastern frontiers. Poland is being encircled by steel cyclones.

2. THE POLISH ARMY

Poland's army represents the usual "East European army type". General von Metzsch defines this type of army as consisting of "millions of superficially trained men whose technical equipment is very considerably behind that of the Western European powers".[1] "West" and "East" as a description of army types has lost its territorial significance. In this respect, the "West" now lies East of Poland as well, because the Red Army is on the same high technical level as the armies of Western Europe, and in many respects it even exceeds it. The Polish Army has had no share in the revolutionary technical developments of the past decade. Generally speaking its structure is still that of the European armies of 1930. The Polish Army has remained at a standstill; it has not kept pace with military technical development.

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[1] General von Metzsch, "*Die Entwicklungstendenzen des Krieges*", published in the compendium of the Inter-parliamentary Union, Geneva 1932, p. 43.

The following features are characteristic of the "East European army type", i.e., the Polish Army and the armies of the Balkan States: they are supported by weak war potentials, and small and not very efficient war industries with backward technique. General Sikorski, the greatest military authority in Poland, never fails to stress the effects of industrial weakness on armaments, and he certainly has his own country in mind. A country like Poland with weak war industries must rapidly become exhausted in war. It is not in a position to make full use of its man-power reserves, and it is compelled to pile up large quantities of war material because it knows that in the event of war it cannot reckon with any very considerable increase in production. General Sikorski declares:

> "Poland must not base her military strategy on the hope that her enemy will become exhausted, because in the event of a long war the time factor will work against her and in favour of the enemy."[1]

Weak war industries mean weakness in modern weapons: motorisation, tanks and the air arm, in other words the absolute certainty of defeat against an enemy with modern equipment. A number of reliable witnesses have given evidence on the armament and supplies of the Polish Army. In 1935 "*Le Document*" of Paris, a pro-Polish organ, published a special number dealing with the armies of Europe, and supplied with a preface by General Weygand, whose name is sufficient guarantee of authenticity. General Weygand, former Chief of the French General Staff, and military adviser to the Polish General Staff during the Polish-Soviet War, can hardly be suspected of pronouncing an unnecessarily harsh verdict on the Polish Army. However, the judgement of "*Le Document*" is very pessimistic:

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[1] General Sikorski, "*La guerre moderne*", Paris 1935, pp. 108, 200 and 218.

> "Unfortunately the Polish Army suffers severely from the general financial shortage which oppresses the country as a whole. This fact influences the modernisation of the army and its equipment with modern war material, and it affects its technical quality. Polish armament is weak, and it is to be feared that in the event of mobilisation the equipment of the reserves will be still weaker. Polish industry has only very limited possibilities. In consequence the leaders of the army rely on the endurance, training and intelligence of their troops, and concentrate too much on the factor of manœuvre without paying sufficient attention to the factor of fire-power. This is particularly the case with regard to the Polish cavalry which seems dazzled by a glorious tradition, and apparently still expects the old-time charge and cut-and-thrust fighting. Owing to lack of finance there has been no motorisation of the army, and there are very few tanks available."[1]

German military publications have expressed similar opinions, and their judgement is of particular weight because they still regard Poland as a possible ally. The "*Deutsche Wehr*" writes:

> "An examination of the present state of the Polish Army reveals the fact that those modern weapons which are generally regarded to-day as decisive, the air arm and the armoured units, are only weakly represented."[2]

And the same journal refers quite openly to the "deterioration" of the Polish Army in relation to the rapid increase in military strength of Germany and the Soviet Union.

There is no doubt about the considerable numerical strength of the Polish Army. Poland takes fifth place in the military hierarchy of continental Europe. The peace-time strength of the Polish Army is 30 Infantry Divisions and 15 Cavalry Brigades. The numerical strength of the Polish Army on a war footing is given by Soviet sources as between 60 and 70 Infantry Divisions. However, the significance of these figures is reduced by two factors: the length of the front on which they will have to fight, and their insufficient fire-power. In the considered opinion of a French military publication,[3] the Polish Army would not be strong enough to man an uninterrupted front in the main theatre of war, and, in any case, it could certainly not hold its front line at a strength at all comparable with the Western front during the World War.

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[1] "*Le Document*", November 1935, p. 21, "*L'Europe en armes*" by Colonel X with a preface by General Weygand.

[2] "*Deutsche Wehr*", May 7th, 1936.

[3] "*Revue d'Infanterie*", January 1936.

The technical basis for the motorisation of the Polish Army is very weak. In 1937 Poland had only 20,000 motor-cars, 5,900 lorries and 900 tractors. In 1935–38 Polish industry produced only 700 light and medium tanks, and 500 tankettes. Soviet sources assume that in the event of war the Polish Army might have between 1,000 and 1,200 tanks, 1,200 tankettes, between 600 and 700 armoured cars, and about 1,000 tractors. In 1938 there were still no big moto-mechanised units in the Polish Army, and by no means all Divisions had moto-mechanised or tank units attached. Cadres had been established around which it was hoped in the event of war to form moto-mechanised units, that was all. There are plans to extend the Tank Corps and to form 2 or 3 Motorised Divisions, but there can be no question of forming any motorised shock army. Any attempts to motorise the Polish Army will be hampered by the low productive capacity of the Polish automobile industry. The "*Deutsche Wehr*" even records a tendency towards de-motorisation in Poland, and points out that there has been a reduction in the sum total of motor transport. A Polish government organ writes as follows:

> "Apart from the splendid carriage of some detachments, our military parades on May 3rd were parades of our deficiency in motorisation. A few dozen small tanks and detachments of motor cyclists—that is far too little for our times."

In 1938 the Polish aero-industry produced between 800 and 1,000 aeroplanes. The quality of certain types (particularly the fighter plane) is believed to be high. Even in 1935 the Polish Army had one very good fighter plane type, the PZL24, which had a speed of over 260 miles an hour. To-day there is a light and a medium bomber of this type with a speed of almost 240 miles an hour. However, the productive capacity of the aero-industry is limited. Reserves are low and Poland cannot reckon with any rapid increase of aeroplane production in the event of war. The Polish air arm consists of about 1,400 machines, of which, however, only between 600 and 700 are first-line planes, i.e., planes which could be used in modern air warfare. It is therefore too small to be used as an independent air army with its own strategic tasks. According to a Soviet source[1] the total bomb load of the Polish air arm is no more than 70 tons, i.e., very small indeed compared with the offensive possibilities of Western air forces, and quite insignificant compared with the bomb salvo of the Red Air Force. Thus aggressive operations in the air do not come into question at all for the Polish Army, and at the same time the weakness of the Polish fighter squadrons makes it impossible to hope for adequate defence against air attack. In a war against Germany or the Soviet Union the mastery of the air would immediately belong to Poland's enemy. Poland would be absolutely helpless against the Red Air Force, for example. This fact is recognised by German experts, and Colonel von Bulow[2] writes that Poland would fall a helpless victim to the attacks of Russian bombers.

The biggest weakness of the Polish Army is thus its lack of modern offensive weapons. The operative instructions of the Polish Army for the use of the air arm, tanks and artillery provide for norms which are on an average only-third one of the corresponding French norms.[3] Compared with the Red Army or with the German Army the weakness of the Polish Army in this respect is still more striking. It may be assumed that in aeroplanes and tanks the Polish Army has about one-tenth of the strength of the Red Army on a peacetime footing, and about one-tenth of the strength of the German Army on a war footing.

The pride of the Polish Army, and its élite corps, is the cavalry, which is the second strongest in Europe. In the opinion of Polish military leaders this arm must be particularly strengthened owing to the length of the frontiers to be defended, the lack of transport facilities, and the necessity of greater mobility. Polish military leadership professes to regard independent Cavalry Brigades as the highly mobile and independent units best suited for the purposes of mobile defence, strategic reconnaissance and attack with subsequent pursuit.[1] The difference between Polish and Soviet cavalry is very great indeed. For the Polish Army cavalry is a substitute for motorisation, whilst for the Red Army it is only a supplement to motorisation. Polish cavalry still consists of nothing but mounted men in the traditional sense, whilst Soviet cavalry has been greatly strengthened by the attachment of motorised units, and trained for combined operations in co-operation with big tank formations, air squadrons and artillery. Writing in Polish military publications Colonel Przeglovski demands the setting up of mixed cavalry formations supplemented by artillery and motorised troops,[2] but no practical steps in this direction have yet been taken. Polish cavalry is thus numerically strong and highly mobile but weak in fire-power, and not supported by modern offensive weapons. Despite these obvious weaknesses it still largely determines the strategic views of Poland's military chiefs—and leads them into dangerous errors.

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[1] "*Voina i Revolutsia*", September–October 1935, p. 101.

[2] Colonel von Bulow in the "*Militarwissenschaftliche Rundschau*", December 1936, p. 816.

[3] Uralski, "Break-through Operations" in "*Voina i Revolutsia*", May–June 1935, p. 97.

3. OFFENSIVE STRATEGY WITHOUT RESOURCES

Polish military strategy stresses the importance of manœuvring and offensive capacity. It cannot be denied that its ideas and plans are enterprising, but they have very little material basis. General Romer gives us the following characteristic description of Poland's war doctrine:

> "Our general strategic situation at the beginning of the war will be favourable, and therefore from the very opening of hostilities we must prosecute the war as actively and rapidly as possible in order to bring it to a victorious conclusion as quickly as possible.

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[1] Arsamassov, "Cavalry in Future Warfare" in "*Voina i Revolutsia*", September–October 1935, pp. 103–112.

[2] Colonel Przeglovski in "*Bellona*", the leading Polish military publication, particularly in the November number 1934.

At the beginning of the war we and our enemies will be operating in enormous areas with poor transport facilities. Our principles must be taken from the lessons of the Napoleonic wars, from the first battles of the World War (particularly on the Eastern front), and from the last Russo–Polish War. Our salvation lies in a war of movement."[1]

However, between the methods recommended by General Romer and the means at the disposal of the Polish Army there is an obvious discrepancy. Such manœuvring and offensive strategy pursued by Poland would be ineffective and aimless to-day. It might be possible against Lithuania or Roumania, but not against the Soviet Union or Germany. If such strategy is used against a numerically superior enemy equipped with modern offensive weapons, an enemy such as Poland has both in the West and in the East, it must lead straight to a catastrophe. Poland's two possible opponents are respectively numerically threefold (Germany) and more than fourfold (the Soviet Union) superior to the Polish Army, and technically (particularly modern offensive weapons) they are approximately ten times as strong. Against such opponents Poland's airy strategy is not applicable at all. Polish strategy is one of manœuvring on foot and on horseback coupled with a desire to take the offensive, but with weak fire-power and very few modern offensive weapons. Against powerful opponents in the West and in the East such a strategy would be nothing but a helpless academic manœuvre rapidly leading to complete collapse. A French military publication [2] describes the principles of operative procedure according to Polish strategy as follows: the greatest possible rapidity of manœuvring, offensive action even on the part of isolated troop units, preparedness to operate even with uncovered flanks, and the organisation of centres of resistance with a mere watch on the gaps between these centres. The terrible risks involved in such strategy against an enemy of superior strength are obvious. When enemy moto-mechanised units penetrate without difficulty into these gaps between the Polish centres of resistance like steel arms, split the Polish front and exploit their superiority in mobility and fire-power to carry out flanking blows and encirclement operations, the sudden collapse of Polish resistance is only a matter of a short time. When Pilsudski developed this strategy of "open spaces" of "*Plein air*", as he called it, he had not the faintest idea of what a tremendous superiority the German and Red Armies would one day enjoy thanks to their modern mobile and armoured technique.

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[1] Quoted in the Czech military organ "*Voienska Rozhledy*" 1935, Vol. V.

[2] "*Revue d'Infanterie*", January 1936, pp. 86–91.

The technical backwardness of the Polish Army is irreparable, and it is becoming fatal for Polish strategy, which is now trying to make a virtue of necessity, developing into strategy pure and simple without consideration to the conditions of modern scientific warfare. Polish strategy affects to regard modern technique with contempt, as very sour grapes, and writing in "*Bellona*", Colonel Missor declares that whoever abandons the real art of war to descend to the level of military materialism must sooner or later be defeated despite the fact that he may be well prepared technically. The art of manœuvring cannot make up for a lack of strength and technique, particularly as the higher war technique of the enemy naturally has its own art of manœuvring, and a more developed one at that. The Polish war doctrine thinks in out-of-date terms; it fails to take the technical revolution in modern warfare into account, and it refuses to see the rapid advance of the German Army, and the tremendous technical progress of the Red Army. Polish strategy was possible in 1920 because the Red Army was numerically weak and poorly armed, and it might have been possible against the German Reichswehr of 1920–30, which possessed no trained reserves and no modern technique, but against the Red Army and the German Army of to-day it would be the height of folly.

Polish strategy has one further organic defect: it has no political basis, and operatively it is therefore suspended in mid air. For years Polish strategy has been in ignorance of the direction in which its main preliminary blow would have to be delivered in the event of war. Polish strategy has been unable to draw up any carefully prepared war plan because the ambiguity of Polish foreign policy has given it no definite direction. The Polish foreign policy which facilitated the tremendous re-armament of National Socialist Germany, and was in part responsible for what the German military publication we have quoted terms "the deterioration of the Polish Army", has also robbed Polish strategy of any solid operative basis. The decisive conditions for any war plan still remain unsettled: the theatre of war and the policy of military alliances. Criticising the vague strategic conceptions put forward by General Sikorski in his book, the organ of the Soviet Commissariat for Defence declares succinctly:

> "An operative plan must have a political basis. To have a definite plan of operation presupposes a definite foreign-political standpoint. The political ambiguity of Poland makes any precise strategical conceptions impossible." [1]

In view of Poland's weakness in war technique her strategy must reconcile itself to taking part in the coming war on the side of one of its powerful neighbours against the other. According to General Romer it appears that Polish strategy supposes the prosecution of the coming war on Soviet territory, but even then any such operations would be carried out by Polish troops according to German strategic conceptions and not according to those of the Polish General Staff. Whether Poland likes it or not, she must finally decide in which camp she will be found in the event of war.

4. POLAND AND NATIONAL SOCIALIST GERMANY

What has Poland to offer Germany as an ally? And what has Germany to offer Poland? Germany definitely needs Polish assistance in order to alter the relation of forces in Europe in her favour and to enable her to wage a war in Eastern Europe. Since 1933 the possibility of a military alliance with Poland has been Germany's big trump in the foreign political game. Poland as a pro-German factor would represent a completely new factor in European politics.

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[1] "*Kraznaya Svesda,*" September 30th, 1936.

Before Hitler came to power neither German foreign policy nor German strategy was able to reckon with such a tempting possibility.

Economically Poland could not give Germany very much. Poland's surplus products consist chiefly of coal and zinc, and her production of oil would not be sufficient to meet her own requirements in the event of war. Further, she has no very important raw-material resources. On the other hand, all that Germany can do for Poland is to assist her in developing her war industries.

From the military standpoint the importance of a possible German–Polish alliance must not be overestimated, though, of course, the possibility must be taken into consideration as a measure of precaution. The primary factor involved is Poland's strategic position: Poland alone is in a position to give Germany the territorial basis of operation she needs against the Soviet Union. Poland's first contribution to such an alliance would be her joint frontier with the Soviet Union, followed up necessarily by her whole territory as a basis of operations and as a battlefield.

The difficulties which arise here are of a twofold nature: technical and political. Germany has a fair chance of attacking the Soviet Union only if she has previously been able to prepare the Polish basis of operations carefully: by the construction of fortifications, by the establishment of stores, depots, oil tanks, etc., and by the construction of roads, air fields, etc. She must connect up Polish territory from 250 to 500 miles deep lying between her and the Soviet frontier with her own territory both with regard to transport and administration. As Poland is both militarily and economically too weak to undertake such a task, Germany would have to make the Polish–Soviet frontier districts into her own basis of operations, a basis at least as powerful as the Soviet basis which exists on the other side of the frontier. This is where political difficulties arise. The linking up of Poland with Germany and the development of Polish territory into an advanced military area of Germany would mean not merely the abandonment of Polish sovereignty, but the direct occupation of Polish territory by German officials and German troops even before the war. However, war preparations on such a scale would result in the outbreak of war automatically long before the Germans had been able to prepare their basis of operations.

Thus the strategic preliminary basis which Poland could offer Germany would decide nothing in itself. All it can do is to give Germany access to the Western frontier of the Soviet Union. Along the whole Northern sector of this frontier the ground is definitely unfavourable to Germany because no important Soviet economic, industrial or raw-material centres could be threatened. Kiev is almost 140 miles from the frontier. That is approximately the same distance as Nuremberg or Cassel is from the German Western frontier. A basis of operations in Poland can therefore give the German Army access only to the marshes of the Pripet and to the North-West frontier of Ukrainia, where the strongest concentration of the Red Army is assembled. As far as the Soviet Union is concerned Poland possesses no important strategic position favourable to an attack. All that Poland can offer Germany therefore is not an increased chance of victory, but the bare possibility of waging war against the Soviet Union at all.

The direct military assistance which the Polish Army could render Germany would be limited. In an anti-Soviet coalition under German leadership Poland's primary role would be to supply man-power for Germany's Eastern theatre of war. The mass value of between 60 and 70 Polish Divisions is undeniable, but they could become a serious military factor only if they were equipped and trained as German cadres. In a Polish–German coalition army the Polish Army could be only a supplement to a powerful German army, as troops better suited to the special conditions prevailing on the East-European front. Polish troops would therefore be used by Germany as cannon fodder and as special troops for mobile warfare in the East, i.e., as German Askaris. It is already quite easy to see what a military alliance with Poland would *not* give Germany: it would not give the German Army any superiority over the Red Army. The numerical and technical superiority of the Red Army over the German Army cannot be compensated by Polish military assistance. The margin of superiority enjoyed by the Soviet Union is greater than the total military strength of Poland. The Red Army will remain stronger than the combined German–Polish armies. An alliance with Poland would also not help Germany to solve the problems of a war on several fronts. Under no circumstances could the Polish Army possibly afford Germany's rear sufficient protection in Eastern Europe. For the mere defence of the Eastern front Germany would have to leave an army larger than the Polish Army.

5. THE LESSONS OF THE RUSSO–POLISH WAR

German fascist hopes concerning the effectiveness of an alliance with Poland have been nourished by the memory of the Russo-Polish War of 1920: if at that time the Polish Army was in a position to invade Soviet Russia, to ward off the counter-offensive of the Red Army, to win the final decisive victory on the Vistula and then to advance again deep into Soviet territory, what might it not do in alliance with the enormous military strength of Germany?

We must go back a little way in military history to clear up this question. No comparison with the Russo–Polish campaign of 1920 is at all possible to-day or could assist us in any way in estimating the comparative strengths of the two armies. Any such comparison is completely out of date and it is quite impossible to find a single point of similarity between then and now. As far as the Red Army is concerned, everything has changed completely since then: numbers, military technique and military strategy.

Let us take the question of numbers first. The Russo–Polish War of 1920 was not fought with mass armies, and it can therefore not be compared with the World War. At no time throughout the war had either side more than 200,000 men at the front. Pilsudski trenchantly describes this angle of the war in his book:

> "It was not a real war; one might call it half a war, or perhaps a fraction of a war; it was a war between children, and the classic theories of warfare turned their back on it with contempt."[1]

Pilsudski had no illusions about the value of the experience gained during the fighting or even about his own successes, and he admits it with a frankness which does him great credit:

> "I was not so naive as to repeat and copy mass strategy without masses. I was too keenly conscious of my own helplessness and of the humiliation my own weakness caused me to think of glossing over the problems before me with such phrases and expressions as were used in 1914 and backed up by real mass power."[2]

The Russo–Polish War of 1920 was waged by improvised States with improvised armies, and with very weak armies at that. A further important factor was that in 1920 the Red Army did not have the numerical superiority one would have thought likely under all circumstances. Estimations of the relative strengths of the combatants at various phases of the war vary, and even Soviet sources are not in entire agreement. However, it is possible to say with certainty that at no time during the war did the Red Army have any decided numerical superiority, not even at the time of its greatest successes. Temporarily, and for a short time only, it was about 20% stronger than its opponent. At the Battle of the Vistula, which was the decisive engagement of the war, the numerical superiority was on the side of the Poles, a fact which is admitted by Pilsudski himself.[3] How did that come about? It must be remembered that 1920 was the third year of an exhausting civil war for the Red Army. The South front against Wrangel was still in existence, and, in fact, in the summer of 1920 the situation there was particularly dangerous. The breakdown of the railway system and the rapid advance of the Red Army made replacements impossible, whilst on the other hand the Poles, operating in a more confined area, were able to concentrate all their available reserves rapidly.

The Polish Army was also better armed and equipped than the Red Army; its troops were better trained, and they were supplied by the Entente powers. Tukhachevski declares in his book on the struggle [1] that the Polish Army was better trained and better armed and equipped than the Red Army.

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[1] Pilsudski, "*L'Année* 1920", Paris 1929, p. 201.

[2] Ibid., p. 197.

[3] Ibid., p. 265.

The strategic history of the 1920 war has been fairly thoroughly pieced together in many expert investigations. In the beginning the Polish Army had the advantage of time and initiative. It made a sudden attack, overwhelmed the weak Soviet frontier defence forces and rapidly occupied a considerable slice of Soviet territory. A vigorous Soviet counterattack broke the Polish front in the South by an encircling movement and a break-through, and the Polish front in the North by a frontal attack. Why did the subsequent offensive break down at the gates of Warsaw? Two groups of causes determined the failure: material and strategical. The Polish historian of the campaign, General Sikorski, who commanded the Fifth Polish Army in 1920, puts down the failure of the Soviet offensive primarily to the dimensions of the Eastern European theatre of war.[2] A decisive victory was impossible in such an enormous area for an army without possibility of reinforcement, without a regularly functioning base behind it and without either technical or numerical superiority over its opponent. The forces in action on the Soviet West front were too weak and too poorly equipped to encircle and destroy the Polish Army in the huge area between the Beresina and the Vistula.

Soviet military literature declares the causes of the defeat to have been the economic exhaustion of the Russian Hinterland and the strategic errors of the Red Army leaders. Soviet criticism of the Polish campaign of the Red Army is severe and ruthless. The present Chief of the Soviet General Staff, Shaposhnikov, holds that the execution of the war plan as a whole was responsible for the Soviet defeat: the South-West wing held back and the drive against Warsaw was delivered from the wrong direction, from the North-West instead of from the South-West, where there were much better possibilities for the development of successful operations.[1] The strategy of the operations before Warsaw is similarly criticised: the launching of a frontal attack and the failure to deliver heavy blows in the flanks and rear of the retreating enemy.

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[1] Tukhachevski, "The Vistula Campaign" (Russian), Moscow 1924.

[2] General Sikorski, "*La campagne polono-russe 1920*", Paris 1929, pp. 285 and 288.

On the other hand, during the course of the whole war up to the battle before Warsaw, Polish strategy showed no superiority. Up to the battle of the Vistula the Polish Supreme Command did very badly, and General Sikorski admits this frankly. The Polish attack on Kiev was folly and it was paid for by the heavy defeat on the Dnieper; and during the whole of the retreat to the West there was no attempt to carry out any active defensive manœuvring. Poland's act of aggression risked the very existence of the young Polish State, whilst Soviet Russia never at any time risked more than losing one or two far-off frontier districts. Poland's stake in the game was Warsaw; Soviet Russia's only Minsk.

The happenings of the Russo–Polish War of 1920 are no argument at all in support of Poland's military strength to-day. In the event of a Polish–German military alliance the National Socialists will find cold comfort in such military reminiscences. The change which has taken place since then in the relative strengths of the combatants is very obvious to-day; it is one of the clearest military-political facts in Europe. Not counting the Special Far Eastern Red Army, the Red Army to-day is four or five times as strong as the Polish Army, and its superiority in trained reserves is just as great. The Soviet covering army on the Western frontier alone is stronger than the whole of the Polish Army. Further, the military-technical superiority of the Red Army is enormous. In aeroplanes and tanks the relation is about 10:1 in favour of the Red Army. The Polish Army is not in a position to contemplate an engagement with the Soviet shock army, which consists of a powerful air force, tank armies, motorised infantry, air infantry, motorised artillery and modern strategic cavalry. Within the first 24 hours of such a conflict the Red Army would have the mastery of the air over

[1] B. Shaposhnikov, "On the Vistula" (Russian), Moscow 1924.

the whole of Poland with all the resultant advantages. Motorisation and the air arm mean the easy overcoming of distances. To-day they mean victory over those vast spaces of Eastern Europe which were largely responsible for the defeat of the Red Army in 1920. To-day the Red Army is technically able to cope with such enormous distances, and it can do it rapidly. Further, a change has taken place not only in numbers and military technical resources, but also in strategical methods. Even in 1920 the Red Army set a pace unknown during the World War: over 310 miles advance in 5 weeks. That is even more rapid than Franchet d'Espérey's advance on the Balkan front in 1918. General Sikorski describes the offensive of the Red Army in 1920 as "decisive, courageous and even daring". In the event of war to-day the strategic élan of 1920 would be supplemented by powerful modern military technique and efficient strategic methods, because to-day Red strategy is master of the art it lacked in 1920; the concentric blow from various directions and the offensive against enemy flanks and rear. Annihilating operations have become the main theme and subject of its studies. To-day Poland is incapable of even effective defence against a Red Army attack, and the idea of a Polish offensive is absurd.

The "miracle on the Vistula" will not, cannot, be repeated in any future campaign.

6. POLAND AND A EUROPEAN DEFENSIVE COALITION

Despite the relative weakness of her army Poland might nevertheless become a military factor of European importance. Her strategic position could become decisive, but only against one enemy and within the framework of one coalition: against Germany and within a European defensive coalition. Geographically and strategically Poland is destined to take part in such a coalition. Her most important military position is the Polish–German frontier. A war front against Germany having Poland as its basis of operations would lie 155 miles to the West of Koenigsberg, and threaten the whole of Eastern and Central Germany. Berlin is 100 miles from the Polish frontier, Breslau only 37, Stettin 67, Goerlitz 75, and Halle and Magdeburg about 187 miles. The big agricultural food centres of Germany could be dealt a paralysing blow from the Polish frontier. No town in Germany is more than two hours' flight from Posen. Air warfare carried out against Germany by a strong air force operating from the Polish corridor, Posen and Polish Upper Silesia could make Germany's position untenable. Poland *has* a decisive strategic position in warfare, though not against the Soviet Union but against Germany. The same is true of the Polish Army. On the side of Germany Polish troops could not create numerical superiority over the Red Army, but within the framework of a great Eastern defensive block and in alliance with the Soviet Union, Poland with her 60 or 70 Divisions on a war footing could give the collective security forces in the East an overwhelming numerical superiority.

However, all this is true only within the framework of such a coalition, only then would Poland's strategic position become of decisive importance against Germany. The strategic position of Poland can be fully utilised only if Poland co-operates with, allies herself with, the Soviet Union. French assistance for Poland must always be relatively small, and it can never consist of more than financial support and war-material supplies in times of peace. In time of war Poland would be economically and militarily dependent on the Soviet Union. She could contemplate a war with Germany only if she was certain of raw materials and military supplies from the Soviet Union, and of military support from the Red Army against the German Army. Thus an alliance with the Soviet Union would be of threefold advantage to Poland: it would defend her against German attack; make possible the utilisation of her favourable strategic position for an offensive (impossible with her own weak and isolated forces); and finally it would give her the only existing possibility of victory. Poland cannot be victorious on Germany's side against the Soviet Union. She cannot be victorious against Germany without the assistance of the Soviet Union. She can be victorious only with the Soviet Union against Germany. On the German front and in a European defensive coalition lies her only hope of survival.

The value and the significance of Poland for such a coalition as a whole, and in particular for its Western European members, will depend on the closeness of her alliance with the Soviet Union, on the possibility which an alliance with the Soviet Union will give her of concentrating her offensive forces on the shortest possible sector of the front against Germany and at the most vulnerable point. It would be absurd to suppose for one moment that Poland could take the place of the Soviet Union in France's system of alliances, or that she could contemplate war against Germany with her own forces. However, Desiré Ferry is not deterred by this, and he puts the case for the Franco–Polish alliance as follows:

> "Poland is a necessary ally for us. She is the only country in Eastern Europe in a position to make an immediate and powerful intervention. Whilst our Russian alliance is indefinite and conditional, our Polish alliance gives us a guarantee of effective and perhaps decisive support."[1]

Each statement is inaccurate, and dangerously so. Poland is not in a position to make any sort of intervention; she has not the necessary military instrument for the purpose. In modern warfare the immediate intervention of which Ferry is thinking can be carried out only by the air arm and by moto-mechanised units. Both these arms are very weakly developed in Poland, and therefore the isolated assistance she would be able to afford as France's ally would be neither effective nor decisive. In view of the numerical and technical superiority of the German Army, Poland's assistance promises no relief to France, but it would make her own collapse inevitable. The only country in Eastern Europe which possesses powerful modern weapons of offence is the Soviet Union, and therefore only the Soviet Union is in a position to afford the Western powers any effective military assistance there.

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[1] Desiré Ferry writing in "*Liberté*", August 18th, 1936.

The Franco–Polish Military Convention signed in Rambouillet in September 1936 can be implemented only if a strong bridge is built between Warsaw and Moscow. The fate of France, and therefore the fate of Western Europe, may be decided on the battlefields of Poland.

CHAPTER XIV

JAPAN AND THE SOVIET UNION

I. JAPAN AS A FACTOR IN A EUROPEAN WAR

OWING TO HER alliance with Germany, Japan is drawn into the orbit of European war preparations. Japanese intervention (as National Socialist Germany sees it) is to bring about a decisive change in the balance of European military power to Germany's advantage. Japan's military strength and her offensive plans are directed against the strongest of Germany's enemies, the Soviet Union. A defensive alliance in Europe is to be crippled by a Japanese attack in the Far East. Germany proposes to answer the coalition of her enemies with a coalition of her own; to answer Franco–Soviet encirclement with a Japanese–German encirclement of the Soviet Union. The blow which is being prepared is directed not only against the Soviet Union but also against her allies. The desired weakening, the longed-for defeat of the Soviet Union in the Far East is to hit France too. The French system of defensive alliances is to be broken on the Amur, on the Soviet–Manchukuo frontier. The strength which the Soviet Union might concentrate in Europe to assist France is to be called off to the Far East and defeated there. This war plan makes Japan into an active combatant in a European war. Two great wars of the twentieth century, two great Russian defeats are to be repeated simultaneously: the Russo–Japanese War and the World War. The victory of Japan over the Soviet Union in the Far East is to facilitate the victorious advance of the German Army in the West.

Is there any justification for such hopes? One thing is quite certain, the German–Japanese alliance makes the automatic extension of the war to two continents inevitable. A war in Europe will find an aggressive Japan in the Far

East, whilst a Japanese attack on the Soviet Union in the Far East, ably seconded by Germany, must let loose European war. Therefore Japan as a military factor must enter into any estimation of the military situation in Europe.

2. THE LIMITATIONS OF JAPANESE MILITARY STRENGTH

Japan belongs to the group of economically weak military States. Japan is not the Prussia of the East, as she has often been termed, but merely the Italy of the East. She is short of raw materials and her industries are relatively weak. As the military strength of a country is determined in the last resort by economic factors owing to the demands of modern war technique, an economically weak State can never be a first-class military power.

Japan's economic system is quite definitely deficient in supplies. It possesses either none at all or only very little of such important raw materials as iron ore, manganese ore, non-ferrous metals, oil, rubber, cotton and wool. Japan produces more than half of her copper requirements, and half of her zinc and iron ore requirements, but only a fraction of her aluminium, tin, lead and oil requirements. Her iron and steel industries will not be in a position to supply all her war-time requirements. In the event of war she must be able to import about 20% of her iron requirements. Her heavy industrial basis is too weak to permit the development of powerful war industries. Her steel production in 1936 was 4·5 million tons, or between a fourth and a fifth of the steel production of Germany or the Soviet Union. A Japanese pamphlet inspired by War Office circles declares:

> "It is hardly necessary to stress the impossibility of building up a war industry on the eve of war. Our present productive possibilities could not even approximately satisfy our war requirements."

And a Japanese newspaper writes:

> "Japanese industry has developed in an abnormal fashion, i.e., the manufacturing industries are progressing but the heavy indus-

tries remain in a deplorable condition. From a military standpoint there could hardly be a more dangerous situation."[1]

The most vulnerable point in Japan's war potential is the weakness of the engineering industry and of the war industries proper. The rudimentary development of the engineering industry represents an insuperable obstacle to any big development of the war industries. In the event of a first-class war the Japanese Army can hope for no more from Japanese industry than more or less adequate provision with rifles and machine-guns. The production of artillery, tanks and aeroplanes will be quite inadequate even judged from the very moderate norms which prevail in the Japanese Army. Japan has the weakest and least-skilled industries of any of the big powers. She is the only big power which has to import a considerable amount of war material even in times of peace. Japanese war industries and Japanese engineering are inferior even to the Italian, though Japanese heavy industry is a little stronger than the Italian. The weakness of Japan in the engineering and war industries makes a comparison with Poland possible, though the Polish aero-industry is considerably superior to the Japanese in quality. Taking the production figures of 1934–36 as a basis it is clear that during the first 18 months of a first-class war, say a war against the Soviet Union, Japan would need to import a considerable part of her requirements in field artillery and anti-aircraft guns. Japan's production of modern offensive weapons is quite inadequate. The industrial basis for army motorisation is also weak. The Japanese automobile industry is very backward, and it produces only a few thousand cars annually. It created quite a stir, in fact, when the Toyoda Works announced their production programme for 1936: 4,000 motor-cars and lorries. The productive capacity of the Japanese tank works does not exceed 3,000 a year, i.e., in view of the wholesale destruction of tanks likely in war-time the Japanese Army would never be able to put more than 1,000 tanks into the field at one time. Any tank strength over and above this would have to be imported. The same is true of aeroplanes. Japan could not produce more than between 5,000 and 6,000 machines a year, which would mean not more than 1,000 machines ready for action at any one time. In war-time an aero-industry must produce annually between four and six times the number of planes in use on an average. Here, too, therefore, Japan would have to rely on imports. The Japanese Army can never reckon with any real strength in modern offensive weapons, and there can be no question of their mass use such as is planned by both Soviet and German strategies. Further, in the event of war Japan's economic system will be threatened from two sides: by a naval blockade, because the Soviet submarine forces in the Pacific are very strong (stronger than the Japanese it is believed); and by air attack, because, as we shall show in greater detail further on, it appears almost certain that from the very beginning of a war the Red Army could establish its hegemony in the air. These are both very real possibilities, and they may very easily prove fatal for the weak Japanese economic system.

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[1] Quoted from "Japan is Preparing for War" by Tanin and Yohan, Editions du Carrefour, Paris 1936, pp. 285–6.

At a time when official and semi-official German military publications had no need to spare the feelings of a future ally, they did not hesitate to express their doubts as to Japan's chances in a first-class war, precisely on account of the weakness of the Japanese economic system. Writing in 1934, at a time when the real significance of the military progress being made in the Soviet Union had not yet been fully recognised, the German "*Militär-Wochenblatt*" declared:

> "At the moment the politico-military chances for Japan are about as unfavourable as they could be. A war between Japan and Soviet Russia at the moment would probably end in the collapse of the Japanese economic system and therefore of the Japanese Army, because at present Japan has no hope whatever of reaching self-sufficiency in economic war supplies."[1]

And on October 10th, 1937, i.e., at a time when the Sino-Japanese War was already proceeding, the "*Frankfurter Zeitung*" wrote:

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[1] "*Militär-Wochenblatt*", October 25th, 1934.

"None other than Prince Konoe himself and his economic advisers have pointed out the weakness of the military economic basis of Japan resulting not only from raw material difficulties, but also from the insufficient productive power of Japanese industrial equipment. The Sino-Japanese conflict brings new proofs every day that the performance of the Japanese economic apparatus, and in particular of the heavy industries and the war industries proper, is still not in accordance with the world political position of Japan and her great aims."

The Japanese Army would experience difficulties not only as a result of the weakness of the economic system. Japan's man-power available for war purposes is less than is generally assumed. The number of trained reserves in Japan is comparatively small: between 2 and 2·5 millions. The regular Japanese army is about 320,000 strong, i.e, hardly stronger than the peace-time army of Poland, although the population of Japan is about three times that of Poland. According to the calculations of a Soviet military expert only about one-fifth of the men liable to military service are actually called up and trained. The reason for this is the army reform which was carried out in 1923–25 and resulted in a very considerable reduction in army effectives. The idea was to reduce numbers whilst increasing technical strength; the remaining effectives were to receive bigger armaments, and the norms of modern weapons were to be increased in an attempt to remedy the technical backwardness of the army. What actually happened was that the Japanese Army did not succeed in reaching European armament norms whilst at the same time its effectives were very considerably reduced. Although Japan is thickly populated, therefore, she has at the moment only about half the number of trained reserves that France has, and only about one-fifth of those of the Soviet Union. In order to raise a mass army on a war footing, therefore, Japan would have to exhaust all her available trained reserves. Foreign experts (German and American) reckon that an army of between 1 and 1·2 million men would have to be sent to the front against the Soviet Union between Mongolia and the coast. As quite a considerable number of troops would have to remain at home, whilst others would be needed for the occupation of North China and Manchuria, it is clear that Japan would need almost the whole of her trained reserves from the very beginning. A war against the Soviet Union would therefore put a great strain upon Japan's man-power potential from the very outset.

3. COULD JAPAN LAUNCH AN OFFENSIVE?

There is no doubt that a very considerable effort has been made to improve the equipment of the Japanese Army. The new armament drive began in 1932–34. The Japanese Army had no share in the great advance in war technique experienced by the European armies in the World War. In 1920 it was still more or less on the level of 1914 with 6 to 8 heavy machine-guns per regiment, etc. Once begun, however, re-armament was continued uninterruptedly. Above all, the infantry was completely re-equipped. Soviet military literature pays tribute to the excellent training of the Japanese infantry, to the high qualities of the Japanese officers' corps and to the increasing strength of Japanese fire-power. A Japanese Infantry Division to-day has 322 machine-guns, 24 37mm. field guns, 24 70mm. field guns, 24 70mm. howitzers, 24 anti-tank guns, 25 75mm. Divisional field guns, 12 105mm. Divisional howitzers and 4 anti-aircraft guns, and at full war strength it will have 615 machine-guns and 48 Divisional guns. Main weight has been laid, apart from machine-guns, on light artillery, though of an old type. Modern mobile artillery, anti-aircraft batteries and anti-tank guns are not very strongly represented, though they are just the artillery weapons Japan will most need in a conflict with the powerful air and tank arms of the Soviet Union. Japanese heavy artillery is also weak. There are thirteen regiments of heavy artillery and a few independent batteries. Artillery equipment is not uniform; it has been only partly renewed and modernised, so that together with the 75mm. gun with a range of over 7 miles there are guns with a range of only 4 miles. The 150mm. guns have various ranges: 3¾, 5 and 6¼ miles. There are thus various types of artillery of varying values in service together. According to a very competent Soviet source[1] Japanese heavy artillery equipment in 1935 included only 168 150mm. howitzers and 48 105mm. guns. At the end of 1936 the Japanese Army had only 400 pieces of heavy artillery.[2]

Thus the strength of the Japanese Army lies almost exclusively in its uniform, and comparatively undifferentiated masses of infantry. Direct artillery support for the infantry units is relatively adequate (Battalion and Brigade artillery), but the artillery as an independent arm (Divisional and heavy ordnance brigades) is relatively weak and has very little break-through power. Japanese infantry units are trained for endurance and they are capable of long marches, but they are not assisted by any technical means to increase their natural mobility and bring it into line with that of mechanised weapons. There is only one Motorised Division in the whole of the army, and the state of the automobile industry makes any wide-scale motorisation impossible. A Motorised Division requires between 2,000 and 2,500 motor vehicles, or about one quarter of the total annual production of the Japanese automobile industry. Thus the Japanese Army has no possibility of mobility in the modern technical and strategical sense, and its manœuvring capacity must necessarily lag far behind that of the highly-motorised Red Army. Japanese cavalry is not weak in itself, but 17 of its 25 regiments are attached to Infantry Divisions, and only 8 are left to form 4 Cavalry Brigades proper for strategic, i.e., independent, use as cavalry. As it is not modernised like the cavalry of the Red Army, i.e., not sufficiently supplied with its own tanks and not trained for close co-operation with the air arm, it cannot form part of a shock army in the modern sense.

However, the biggest weakness of the Japanese Army is probably the state of the tank arm. In 1936–37 it was estimated that there were between 800 and 1,000 tanks: about 300 concentrated in 2 Moto-Mechanised Brigades and 2 Tank Regiments, and the rest attached in small units to the infantry. Owing to the technical backwardness of Japanese industry, the technical qualities of Japan's tanks are poor. Japan has no heavy break-through tanks, and no fast and super-fast tanks. The majority of her tanks consist of light and medium machines. The most powerful tank is the 14-ton tank "94", which is also the best equipped. The fastest Japanese tank is the light reconnaissance tank "92". The speed of this tank is about 30 miles an hour, a very moderate performance judged by European standards. Japan thus lacks the decisive weapon for the formation of a modern motorised shock army, which cannot exist without strong tank formations. The Japanese Army can therefore never develop any high mobility or powerful break-through force, and its offensive powers are limited from the beginning by its weak war technique.

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[1] Assik, "The Armed Forces of Japan" (Russian), Moscow 1935.

[2] "*Kraznaya Svesda*", February 26th, 1937.

4. THE CRISIS IN THE JAPANESE AIR FORCE

Japan's Air Force is also unable to keep pace with the development of military aviation in Europe. In 1937 she had 18 air regiments organised in brigades. The air force totalled about 1,000 machines and about 800 hydroplanes in 39 squadrons. The average speed of the fighting planes is between 150 and 180 miles an hour (types J91, J92 and J93), one type (J95) has a speed of over 200 miles and another (J96) a speed of 250 miles, but that is the maximum. Japanese bombers, mostly developments of the Junker type, have an average speed of 155 miles an hour and can carry a bomb load of between 0·6 and 1 ton. Japanese backwardness in this respect as compared with Europe is obvious. An attempt is being made to raise the quality of the air force by purchasing foreign machines and manufacturing under licence. It is known that French models have been purchased: the light fast bomber Bréguet-Vultur with a speed of almost 300 miles an hour, and the Devoitine 510 fighter with a speed of over 250 miles an hour. The American transport and bomber Douglas DC2 has also been purchased. Two things make it difficult for Japan to use foreign high-performance planes. Her air-force cadres are numerically weak. The air force (not including the naval air arm) has only 3 training depots, and in addition 1 training depot for air reconnaissance, 1 depot for aeronautics, and 1 depot for air fighting. In 1936 only 300 pilots passed out in Japan, and in 1934 only 150. The insignificance of such figures is obvious when we know that in 1935–36 the Red Air Force had over 80 training depots, including 44 schools for pilots, and that this network of training centres is being rapidly extended in order to train 150,000 fighting pilots. The second defect is the insufficient skill of the air-force personnel. The Japanese Air Force has the highest percentage of air accidents known to military aviation. In 1935, on the basis of incomplete statistics, no less than 200 military planes were destroyed in accidents, or over 10% of the total air strength. In the first few months of 1936 there were 40 disasters and 50 less serious accidents in the naval air arm alone, whereby 40 airmen lost their lives and 50 were seriously injured. An interesting and characteristic detail is that of the 3 Douglas DC2 aeroplanes purchased from the U.S.A. 2 have already crashed in Japanese hands.

Professor E. Guyot, who visited Japan in 1936 and paid special attention to the question of the air force, writes as follows about Japan's airmen:

> "The Japanese are excellent imitators, but they are not creative. They assemble parts copied from foreign models. When they have finished the machine takes the air and a little later lies smashed on the ground. 'Their machines seem to have no soul', the military attaché of a power not at all friendly to Russia said to me; and another declared, 'One has to be a hero to trust one's life to a Japanese aeroplane, even as a tourist, unless one wishes to commit suicide.' The Japanese seem to lack something physical as pilots. I have heard it said that their hearing fails in the air."[1]

The military consequences of this all-round failure in the air will be serious. A Japanese Air Force built up on such a defective basis (a weak aero-industry, insufficient pilots insufficiently expert) can have no very great fighting value. Its offensive strength is low and it will be unable to give the Japanese land forces a fair chance of attack, not to speak of a fair chance of victory, and it will certainly not be able to defend the Japanese land forces and Japanese towns effectively against an enemy air arm as numerically and technically superior as the Soviet air arm.

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[1] Professor E. Guyot writing in "*Vu*", November 25th, 1936, p. 1432.

5. THE SIX-YEAR ARMY REFORM

The Japanese military authorities are doing their best to put their army on a European level, and there is no doubt that they are well aware that at the moment Japan's military strength is insufficient for a big war. The new Japanese armament plan provides for the strengthening of the army both technically and numerically. This is to be carried out in five or six years, beginning in 1936. The number of Infantry Divisions is to be increased from 17 to 25. Preparatory work for the setting up of 4 new Divisions began in 1936. After the carrying out of this reform the total strength of the army will be over 500,000 men. A real reform is intended, not merely a numerical increase in effectives. The army is to be modernised. The air force is to be strengthened and its equipment completely renewed. In the first place Japan's prototypes are to be brought up to the European level. The latest and best product of the Japanese aero-industry, the fighter plane "Nakadzima 1", built after the American Boeing type, has a speed of about 250 miles an hour, and the American type Nothrope, which has more or less the same speed, is being tested for introduction into the naval air arm. Army motorisation is also to be pressed forward. The new field service and training manual for light tank formations envisages a certain strategic independence. Further new tank formations and moto-mechanised units are to be set up. The artillery, and particularly the heavy artillery, is to be strengthened, and uniformity in equipment is being aimed at. The engineering corps, chemical troops, the army transport service, etc., are to be strengthened and modernised, and motorised at least in part. In short, a serious attempt is now being made to give Japan new military strength and efficiency in her struggle for Asiatic dominance.

However, this army reform is to be a slow business. Between 5 and 6 years represents a long stretch in the armament race of the big powers. Can that be accepted as a confession that the Japanese Army will not be in a position to take up the struggle with the Soviet Union before 1942? Even then, and in the best case, the Japanese Army will have reached the armament level of the medium-strength European armies of 1939, not the level of the Red Army or the German Army. Even the ideal aimed at for the next few years would not come up to the 1939 strength of the Red Army or the German Army. And still more serious is the fact that Japan will by that time lag still further behind the armament progression of the big military powers: in 1942 the difference in quality between the Japanese Army and the Red Army will undoubtedly be even greater than it is to-day—if such an armament race can proceed as long as that without the outbreak of war. In any case, the unpalatable truth for Japan is that her army as it exists to-day, and not as it may exist in a few years' time, must be compared with the Red Army of to-day.

6. JAPANESE MILITARY STRATEGY

Despite the technical weakness of the army, Japanese military strategy is definitely offensive. This character is determined by three main factors: the lessons of the Russo-Japanese War (in which Japanese strategy showed skill and initiative, launched a sudden offensive and won the victory without possessing any numerical or technical superiority over a passive enemy); the lessons of the minor wars in China and Manchuria (which Japan has now been waging for about twenty years almost without interruption, and which have been won comparatively easily as simple colonial campaigns, thereby heightening the confidence of the Japanese Army and strengthening its belief in its invincibility); and finally the unconditional acceptance of the latest German idea of totalitarian warfare and of the German idea of victory in a sudden and decisive rush.

To think that such ideas can be used in a war against the Soviet Union is to harbour dangerous illusions. The Japanese Army will have to face something very different from the Tsarist Army of 1904–5: an army with a very different war technique and very different strategy. All comparisons between the Russo-Japanese War of 1904–5 and the Russo-Japanese War of the future are false. It is a most dangerous illusion if the Japanese army leaders imagine that their chain of victories in China and Manchuria is going to be continued with the same means against the Soviet Union. Referring to these minor operations Svietshin declares with justification that the wholesale plundering and sacking which accompanied them have corrupted the Japanese Army and narrowed its horizon of operative ideas. There is a certain similarity between the army of Napoleon III (which experienced its baptism of fire in the Algerian campaign and met with disaster at Sedan) and the Japanese Army of to-day. The soldiers of Napoleon III were fine men, the veterans of two decades of colonial warfare, but they were inexperienced in modern warfare, and the same is true of the Japanese Army to-day. The Japanese General Staff uncritically swallows the latest German war doctrine, a doctrine which is risky enough even for Germany, but which may easily prove catastrophic for Japan because she has nothing like the war technique which gives Germany at least some sort of chance in the gamble. There is a crying discrepancy between the offensive character of Japanese military strategy and the very moderate war technique of the Japanese Army. Japanese military strategy demands a quick decision, even a lightning decision. General Araki declares optimistically that the shouts of "Bansai!" cheering the departing troops to battle must hardly have died away before new shouts of "Bansai!" greet the returning victors. But the plain truth is that the Japanese Army has not the mobility and the break-through power necessary to win a quick decision against a strong opponent. It is no secret that Japan's war plan envisages the launching of a sudden and unexpected attack on the aerodromes of the Red Army in the Far East. But what success is the weak Japanese Air Force with its few bombers and its insufficiently skilful pilots (who do not conduct themselves with ease even on their own air fields) likely to obtain against powerful Soviet anti-aircraft batteries and Red fighter planes with vastly superior speed?

Japanese Field Service Instructions declare that superiority in artillery fire is the guarantee of a successful offensive, but Japan's own artillery is on the whole rather weak, whilst her heavy artillery is definitely weak. The same instructions observe that the best form of manœuvre for the destruction of the enemy is encirclement, but in modern warfare encirclement can be obtained only by an army whose mobility is greater than that of the enemy, and to-day that greater mobility can be obtained only by intensive motorisation. Against an enemy like the Red Army the Japanese Army is in a hopeless position in this respect. The instructions then go on to say that the aim of a pursuing army must be to overtake the enemy speedily in order to complete his destruction, and that this must be done by the cavalry, the artillery and the air force. However, none of these arms of the Japanese Army is strong enough to perform such a task successfully. The great discrepancy between Japan's war plans and her war resources, between the strategic tasks set and the very limited strength available for their performance, may plunge Japan into a military catastrophe, and the first important trial of strength between her army and that of the Soviet Union has already taken place. The Battle of Changkufeng demonstrated the technical and tactical superiority of the Red Army.

7. THE RED ARMY IN THE FAR EAST

What is the military strength of the Red Army in the Far East?

There have been a number of competent estimates, and they all agreed on essentials. In 1933–35 the Special Far Eastern Red Army is said to have consisted of between 10 and 11 Infantry Divisions and between 3 and 4 Cavalry Divisions, supported by strong technical troops of all kinds, including the air arm, tank units, chemical detachments, engineers, etc., totalling over 200,000 men. These estimates do not include certain forces in the neighbourhood of the frontier which could strengthen the army at a moment's notice, for instance the special frontier defence corps of between 40,000 and 50,000 men. This force is a military one and highly trained, but it is under the orders of the Commissariat of the Interior and not of the Commissariat for Defence. They also do not include the mixed Soviet–Mongolian Army on the extreme right flank of the front, an army whose strength probably lies somewhere between 50,000 and 100,000 men. Together with the coastal army group (Vladivostock), the Amur army group (Blagovestchensk–Habarovsk), and the Transbaikal army group (Tchita), this represents the fourth important strategical zone of the Red Army in the Far East. The Italian military publication "*Rivista di Fanteria*" was the first foreign source to point out the strength and importance of this last zone. In 1933–35 therefore the Red Army in the Far East was in a position to put about 300,000 men into the field against Japan. According to American and German information it was further strengthened in the succeeding years, so that in 1938 it numbered over 400,000 men. As a result of the protracted Sino-Japanese War, the extreme political tension of the summer of 1938, and the Battle of Changkufeng, the Special Far Eastern Red Army has since been further strengthened, and by the autumn of 1938 it was reliably reported to have numbered over 500,000 men.

For the event of war it would have very considerable reserves. There are first of all the strategic reserves for the Far East, the trained regular reserves of the Red Army allotted to this theatre of war. The Siberian, Transbaikal, Central Asiatic (Turkestan) and Ural military districts are regarded as the Hinterland of the Far Eastern Army, and in peace-time there is a total of about 14 Infantry and 4 Cavalry Divisions stationed in this area. Then there are two further categories of reservists: first the reservists proper of the Far Eastern Army. These men have been settled far behind the lines as peasants. The aim of this military agrarian policy is to obtain the quickest possible mobilisation of the reservists for the Far Eastern Army in the event of war. And then there are the normal reservists of the above-mentioned Asiatic military districts and of the Urals, who will be allotted to the East Asiatic front. On the whole we may reckon that the Soviet Far Eastern Red Army on a war footing will consist of between 40 and 50 Divisions.

In peace-time and at the opening of hostilities the numerical superiority of the Red Army is undoubted. Soviet sources, including the information of such a competent witness as Marshal Bluecher himself, put the strength of the Japanese forces in Manchuria in 1934–35 at between 130,000 and 150,000 men. The standard Soviet military work on the Japanese Army puts Japanese strength in Manchuria at this time as 3 Infantry Divisions, 5 special Infantry Brigades and 2 Cavalry Brigades.[1] Since then, however, and in particular since the beginning of the Sino–Japanese War, the Japanese strength in Manchuria has been considerably increased. According to the organ of the Soviet Commissariat for Defence, the Japanese strength in the spring of 1938 in Manchuria was about 300,000 men. The Japanese military authorities can also count on the army of the Manchukuo State as a reserve, but German sources declare that this army is both politically and militarily unreliable: desertions are a mass phenomenon, and both equipment and training are poor. In fact it cannot be regarded as a regular army at all, and it certainly cannot be compared with the army of the Mongolian People's Re-

[1] Assik, "The Armed Forces of Japan" (Russian), Moscow 1935.

public, which has been well trained and well equipped by the Red Army, and which will fight at its side in the event of war. The numerical superiority of the Red Army has been recognised by the Japanese themselves, and Nagaoki writes as follows in the Osaka newspaper "*Mainitchi*":

> "The fighting forces of the Soviet Union (in the Far East) are very considerably stronger than those of Japan."[1]

The Special Far Eastern Army of the Soviet Union with its four army groups is numerically at least as strong as the whole Japanese Army in peace-time, including forces at home and abroad. The Japanese Army could launch an attack only after the transport of all its forces to the Asiatic mainland and after at least partial mobilisation, and it would be able to obtain a certain numerical superiority over the Special Far Eastern Red Army on a war footing only after the complete mobilisation of all its available reserves. And in any case this not very important advantage could be obtained only after tremendous efforts and only after several months of war, and even then it would under no circumstances prove decisive, because the Red Army would be able to neutralise it in three ways: by the strength of its defensive positions, by the superiority of its armament, particularly with regard to all modern weapons of offence, and by its strategical position.

The line of fortifications which runs from Vladivostock to Lake Baikal along the whole Soviet–Manchukuo frontier is undoubtedly the strongest in the world after the famous Maginot Line of France. It is reported to include over 1,000 strong points, for the most part connected up with each other, and in some places the gas-proof and bomb-proof subterranean chambers, etc., extend inland to a depth of over 3 miles. Powerful obstacles and numerous tank traps have been built.[2] It is hardly likely that an army like the Japanese, insufficiently supplied with modern weapons of offence, with weak artillery strength and few tanks, could ever penetrate such defences. Even the anti-Soviet General Golovin is convinced that the Japanese will not even attempt to break through the fortified lines on the Amur, but will attempt to go round them by a blow in the rear along the coastal district to the North of Vladivostock.[1]

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[1] "*Mainitchi*", Osaka, March 15th, 1934, quoted by Tanin and Yohan in their book, "Japan is Preparing for War", Editions du Carrefour, Paris 1936, p. 44.

[2] Report of a lecture delivered by Colonel Grinevski in Harbin and published in "*La France Militaire*" in March 1935.

Then there is the decisive superiority of the Red Army in modern weapons of offence to be taken into consideration. The German "*Militär-Wochenblatt*" refers to the Far Eastern Red Army as " an élite corps". The Special Far Eastern Red Army has, in fact, a totally different structure from that of the Japanese Army. Unlike the Japanese Army, which consists for the most part of uniform masses of infantry inadequately supplied with modern weapons of offence, the Special Far Eastern Red Army is composed of all arms in a way calculated to give it the greatest possible break-through and offensive strength coupled with great mobility. The same German source reports that it is particularly well supplied with powerful heavy artillery and masses of light artillery. The element of mobility is represented by strong forces of modern cavalry and a high level of motorisation, and this element may easily become decisive in the vast areas of Mongolia and Manchuria. According to the Italian "*Rivista di Fanteria*", over 30 regiments of strategic cavalry are concentrated on the Mongolian, i.e., the right flank of the Far Eastern Red Army. In accordance with its infantry strength, the norms of equipment with mechanical weapons and the possibilities of manœuvring in the Far East, we may assume that the Red Army has now about 3,000 tanks on this front. The war-technical and strategic superiority of the Red Army was clearly demonstrated in the Battle of Changkufeng, the first trial of strength between the Japanese and Red Armies. According to a Soviet source the equipment of the Japanese Army in Manchuria with modern weapons of offence was very inadequate indeed (though this estimate was for 1935), and consisted of between 150 and 180 tanks, 100 armoured cars, 20 armoured trains, between 20 and 30 heavy guns, and between 250 and

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[1] N. Golovin, "The Present Strategical Situation in the Far East" (Russian), Belgrade 1934, p. 47.

300 aeroplanes. The very objective book written by Tanin and Yohan declares that the superiority of the Red Army in the Far East in the air, in motorisation, mechanisation, fire-power and cavalry is generally recognised in Japan. The superiority of the Red Air Force is, of course, of particular importance.

8. THE AIR SUPERIORITY OF THE SOVIET UNION

In no other war between two big powers could the air force play such a big (and perhaps even decisive) role as in a conflict between Japan and the Soviet Union. The great possibilities of air warfare in the Far East are determined by various factors: by the absolute superiority of the Red Air Force both in quality and quantity; by the geographical situation (the Japanese islands are particularly vulnerable to air attack); and finally by the strategic tasks assigned to the air arm by the Red General Staff, and by the extreme care with which it has prepared for air warfare.

Immediately on the formation of the Special Far Eastern Red Army in 1932, its leadership aimed at securing mastery in the air over Japan, and by 1933 this aim had been achieved. Speaking at the congress of the Communist Party of the Soviet Union at the beginning of 1934 Marshal Bluecher declared: "We have an increasing numerical superiority in the air over the Japanese." As early as 1933–34 the Red air arm was technically in a position to carry air warfare into Japan proper. Even then it was already operatively and strategically prepared and ready to attack the vital centres of Japan. According to Colonel Grinevski, at the beginning of 1935 the Red Army had 750 aeroplanes in the Far East. The report of the Japanese War Office on Soviet military strength along the Mongolian–Manchurian frontier in 1935 reckoned with 900 aeroplanes, and added that preparations were being made to increase this number to over 3,000.[1] If we take into consideration the great progress made by the Soviet air arm in the years 1935–38 (something like a doubling of its effectives), then it is probable that the Red Army in the Far East has now between 2,000 and 3,000 first-line planes, and in addition very considerable strategic reserves, and it is quite certain that after the signing of the German–Japanese alliance the military leaders of the Soviet Union began to attach even greater importance to the future theatre of war in the Far East. Since 1934 the technical chances of successful air warfare against Japan have been considerably improved. Since 1934 the speed, radius and load of the Soviet bomber have approximately doubled. The Moscow correspondent of the "*Petit Parisien*" reported in May 1936 that the very finest air material was being sent to the Far East. If any doubt existed about Soviet air intentions Colonel Grinevski dissipated it:

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[1] Published in extracts in "The Japan Advertiser", February 20th, 1936.

> "The supreme command is being given a powerful bombing weapon capable of operative air warfare over great distances."

The superiority of the Red Army in the air promises to develop into one of the decisive factors in a war in the Far East. The British authority General Groves, who is by no means pro-Soviet, writes:

> "The Japanese Air Force is weaker than that of the Russians, its striking power is far less, and it comprises a few long-range bombers. It would be difficult for Japan to reduce the existing disparity between her air strength and that of Russia . . . for her aircraft construction is comparatively small and her commercial air development inconsiderable."[1]

That was true in 1935 when General Groves put it on record, and it is doubly true in 1939, because in the meantime the margin of strength between the two air arms has greatly increased. Since 1935 the strength of the Red Air Force has steadily increased in all respects, whereas the Japanese Air Force has remained stagnant both in quality and quantity. To-day the numerical relation of the two air forces is not less than 2 : 1 in favour of the Far Eastern Red Army. With the addition of the Soviet air reserves this superiority would be increased still further. Japan can put no more than 1,000 machines in the air against 2,000 or 3,000

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[1] General Groves, "Our Future in the Air", Harrap, London 1935, p. 52.

Red planes. The few hundred Japanese hydroplanes will not make much difference because they are suited chiefly for operations at sea and along the coasts, and their speed is very low. Further, the actual proportions in strength are much more unfavourable to Japan than would appear from a mere numerical comparison. The Japanese Air Force has no more than 25% bombers, whilst the Soviet Air Force in the Far East has over 50%. In addition Soviet bombers are of far higher quality than the Japanese. The approximately 250 bombers of the Japanese Air Force have an average capacity of less than one ton, whilst the approximately 1,500 bombers of the Soviet Air Force in the Far East have an average capacity of over a ton each. The bomb salvo, the total bomb load of the whole Japanese Air Force, is not more than 200 tons, whilst the bomb salvo of the Red air arm is perhaps 1,500 tons. Professor Guyot speaks quite plainly of the overwhelming superiority of the Soviet air arm in the Far East both in quality and quantity, and particularly in quality. In addition there is the great superiority of the Soviet Union in air-strategic position. General Groves writes:

> "Japan is no longer in a dictatorial position on the mainland, for she is threatened by the powerful Russian air fleet. The fact is that every one of Japan's great cities, every one of her ports on the mainland, and every one of her military centres in Korea and Manchukuo is within range of air attack by the Russians. In aerial warfare the balance would be heavily weighted against Japan, for the vulnerability of the Soviet Maritime Province as a target for attack is insignificant in comparison with that of the densely populated island empire, with its extensive urban areas, its centres of government and of administration, its dockyards,' arsenals and munition factories."[1]

At the narrowest part of the Sea of Japan the direct air line between the Soviet maritime provinces and Japan (Otaru–Hakodate) is only 200 miles, and Tokio itself lies only about 680 miles away, whilst no single point anywhere on the Japanese islands lies more than 875 miles removed from Soviet territory. Similar distances apply to the Manchukuo–Korea hinterland of the Japanese front. Modern bombers have a radius of action of over 1,250 miles. The sea is no more a barrier to air attack on Japan than it is in the case of Great Britain; in fact Rougeron's observations apply still more to Japan because her defence technique is weaker. All Japan's great harbours are in the position of frontier towns with regard to the powerful Red air arm. This great danger from air attack is increased by the particular vulnerability of Japan's towns owing to the flimsy construction of their houses. Between one and two tons of bombs per hectare[1] are necessary for the destruction of the fairly solidly built houses of Western Europe, whilst for lighter rural buildings or the big halls and sheds of industrial undertakings only about one tenth of that amount is necessary.[2] However, the Japanese buildings are capable of even less resistance to high explosives, and we must therefore assume that the destructive capacities of the Red Air Force operating against Japanese towns will be several times greater than those of a European air force operating against the towns of a European enemy. Considered as an army of strategic air attack, the Red Air Force stationed in the Far East is stronger than any European air force would be against a possible European opponent. The superiority of the Soviet Union over Japan in the air (particularly when the higher technical and fighting qualities of the Red Air Force are taken into consideration) is greater than the difference in strength which exists, or possibly could exist, between any two big powers in Europe, say between Germany and the Soviet Union, or between Germany and France. Japan's possibilities of air defence, her fighting planes and her anti-aircraft artillery, are weaker than those of any European power. The Soviet Union would therefore obtain mastery of the air against Japan more easily and more rapidly than any big European power could against any other big European power. In short, all the factors likely to bring about a crushing defeat of Japan in air warfare are already clearly visible.

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[1] General Groves, " Our Future in the Air," Harrap, London 1935, p. 52.

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[1] A hectare is 2·471 acres. Tr.

[2] Rougeron, "*Aviation de bombardement*", Paris 1936, Vol. II, pp. 198–9.

9. THE STRATEGIC POSITION OF THE FAR EASTERN RED ARMY

The Red General Staff has certainly no intention of relying entirely on Soviet air superiority to ward off a Japanese attack. Soviet air superiority will be only one element of success. The Soviet air arm will support and intensify the operations of the Soviet land forces and carry them far into enemy country. Quite apart from air warfare the Far Eastern Red Army possesses a strategic opening position very favourable to a counter-offensive. Its opening positions lie along the Soviet frontiers in the Far East in the form of a great arc having a depth of over 600 miles and holding the positions of the enemy in a great pincers. Japanese military literature has not failed to recognise the resultant dangers for the Japanese forces in Manchuria in the event of war, and a competent military observer writes:

> "The positions of the Soviet Union surround Manchuria on three sides, from the East, from the North and from the West. That is the so-called position on the outer line. Such positions are favourable for an offensive in the event of war."[1]

The two great arms which stretch round the positions of the Japanese forces in the East and in the West are the Maritime Province with its strongly fortified head at Vladivostock, and Outer Mongolia. This geographical position determines the strategy of the Red Army in the Far East.

Strategy is closely connected with transport facilities in this area. The offensive strategy of the Red Army in the Far East is based not only on its own strength, but also on a newly developed and highly efficient network of transport facilities which has completely changed the relation of forces. The question of supplies for the Red Army in the Far East has been doubly solved: both from the standpoint of material and transport. It has been solved materially by the creation of an independent foodstuffs and industrial basis, including its own big shipyards and aeroplane factories. As early as 1934 the German military Press prophesied that the task laid down by the military leadership of the Soviet Union for the creation of an economically independent and powerful military basis in the Far East would be carried out fully within the fairly near future. In 1938 this task was already practically completed, and the transport problem as such is either already solved or rapidly approaching solution. This question is of decisive strategic importance. The backbone of the transport system of the Red Army in the Far East is first of all the old Trans-Siberian Railway (which has now been given a double track throughout its entire length from the Urals to Vladivostock), and secondly the new Siberian railway, which runs to the North of the old line, from Taitchet in Central Siberia to the estuary of the Amur. The report of the Japanese War Office from which we have already quoted assumes that after the completion of the second track on the old Trans-Siberian line, its military transport capacity will have been increased between five and seven times as compared with its capacity during the Russo-Japanese War. According to General Golovin, the Amur Railway, the Eastern track of the Trans-Siberian line, which was formerly a single-track line, could accommodate 14 trains daily. The fourfold increase brought about by the establishment of the double track and the parallel line will permit the passage of up to 60 trains a day, and this would provide ample supplies for two of the army groups out of the existing four (the one in the Maritime Province and the other on the Amur) with a strength of 30 Divisions. To the North-West of the Maritime Province lateral connections are being built between the two lines, and this will still further improve the strategic situation of the two army groups.

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[1] In "*Hirode*", January 1934.

The transport network in the Western half of the area of operations has been even more thoroughly developed. The whole district between Central Asia and the Transbaikal area has been covered with a network of horizontal, vertical and diagonal strategic railway lines and motor roads. The network spreads out in a gigantic arc from Chinese Turkestan to the district which lies to the North-East of Lake Baikal. The strategically most important of these lines are the Semipalatinsk–Uliassutai line from Central Asia to the South-West district of Outer Mongolia, with a length of over 1,200 miles, and the line from Verchna-Udinski to Ulan-Bator, i.e., from the Lake Baikal district to the Eastern part of Outer Mongolia. Both these lines were completed in 1938, according to the information of German and Japanese military publications. In the centre the way to the Mongolian frontier has been opened up by the Novosibirsk–Biysk, Tomsk–Stalinsk and Atchinsk–Minussinsk lines. Thus transport facilities have been thoroughly developed on the extreme West, right wing of the future front against Japan. In the Mongolian People's Republic itself a number of motor-roads have been laid out towards the South in the direction of North China (Kalgan), particularly from the two most important strategic points: Uliassutai and Ulan-Bator.

This road-building probably represents the biggest strategic transport feat of our generation. In a very short time a railway network of over 5,000 miles has been completed. Its strategic importance is enormous. Referring to the military consequences of the development of new transport facilities in the Amur district a German military organ [1] writes that in the event of war they will shift the strategic advantage of position still more definitely to the side of the Soviet Union. The same publication regards the opening up of Mongolia by strategic railway lines as the most effective means of encircling the Japanese forces.[2] One thing is now quite certain, and that is that the Red Army in the Far East has strategic railway lines at its disposal, over and above the ordinary requirements of transport, which will permit it to utilise its favourable strategic positions to the full in a war of manœuvre. The development of railway lines and motor roads has tremendously increased the strategic value of these positions. Vladivostock has now developed from a mere fortified defensive key position into a gateway for an attack both into Korea and Eastern Manchuria. The position on the Amur is being strengthened, but the strongest position of all is being created on the right wing of the Far Eastern Red Army in the enormous area between the Tchita frontier station of Manchuria and Uliassutai. The "*Frankfurter Zeitung*" writes as follows concerning the strategic possibilities of this position:

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[1] "*Deutsche Wehr*", No. 33, 1936, p. 532.

[2] Ibid., No. 31, 1936, p. 438.

> "The steppes represent an ideal field of operations for an army well equipped with cavalry and armoured cars—and the army of Marshal Bluecher is so equipped."

A wide encirclement of the Japanese front from Mongolia in the direction of the North-China districts occupied by the Japanese is now quite feasible. Thus the elements of a great concentric drive from various directions (the favourite method of Red strategy) are becoming visible.

10. THE BALANCE OF THE SINO–JAPANESE WAR

Despite her recent military successes, by the winter of 1938–39 the war against China had considerably worsened Japan's military position on the Asiatic mainland.

Even in its earliest stages the war demanded strenuous efforts on the part of Japan. The programme of army reform, planned to take place over a period of six years, has already become obsolete. By the late autumn of 1938 over 2·5 million men had already been called up, and with this the trained reserves proper were practically exhausted. In the winter of 1938–39 Japan had no less than a million men on the Chinese front alone. However, the increase was not the steady and organic one planned to take place over a period of years in peace-time; it was a hastily carried out war-time mobilisation. Direct war production was increased by every possible means, but without any previous increase in the sum total of industrial production necessary for war economy, and without any careful reorganisation of the economic system as a whole. On the contrary, it was precisely the war in China which prevented the proposed technical and productive reorganisation of the war industries, and the "*Frankfurter Zeitung*" writes:

> "The Chinese conflict has apparently caused the abandonment of any systematic extension of the military economic basis of Japan as a whole."[1]

[1] "*Frankfurter Zeitung*", October 1st, 1937.

Japan's losses in men and her expenditure in war materials to date have been very considerable. Her total casualties (dead, wounded, prisoners, missing and sick) are reported to exceed 700,000 men, and about 800 Japanese planes have been shot down or destroyed in one way or the other. The increasing shortage of materials at the front shows that Japan has already exhausted her accumulated stores of war material; and she has also used up a very considerable amount of the raw-material supplies allotted to the war industries.

The war has developed into a very severe test for Japan's war technique, and her offensive weapons have proved barely adequate even against China, a country which was not protected by any strong fortifications, and whose army was very inadequately equipped indeed. The Japanese Air Force has not succeeded in paralysing any really vital centres, and it did not even succeed in stopping traffic along the important railway line Hongkong–Canton, which has carried the greater part of the arms, etc., China has imported, and it was left for the military occupation of Canton to accomplish this task. In short, the Japanese Air Force has not proved itself a decisive factor in any big battle, and in a very few months (by the spring of 1938) the rapidly improvised Chinese Air Force showed itself to be quite a formidable adversary. The Japanese tank formations have not succeeded in carrying out any break-through operations on a big scale. The artillery is the only arm, apart from infantry, which the Japanese have succeeded in using effectively on a fairly large scale and with a fair degree of tactical skill, for instance in the battles for Shanghai and Nanking. From all this one may judge how ineffective the weak offensive weapons of the Japanese Army are likely to prove against powerful Soviet fortifications and against the superior war technique of the Red Army. The operations of the Japanese Army in China have been no more than a faint imitation of modern scientific warfare.

The operations in China have caused a serious crisis in Japanese strategy. Japan utterly failed to secure the rapid and decisive victory on which she had reckoned. Japan's military leaders have undoubtedly shown considerable tactical skill and energy in the carrying out of individual operations, for instance, the taking of Canton by landing operations was a daring and well-directed action, and the conquest of Hankow by an enveloping movement was carried through with great pertinacity. In this Japan's military leaders were assisted very greatly by the good organisation of the army and by the endurance of their troops. In decisive matters, however, Japanese strategy miscalculated. It was not sufficiently adapted to the territorial conditions of the theatre of war, and it did not reckon with so much resistance. The chief method it adopted was the concentration of strong forces for a breakthrough on short sectors of the front, and this was done without flank protection and without pressure on the enemy's flanks. Japanese offensives quickly exhausted themselves and ran to a standstill in the enormous areas involved. Since the beginning of 1938 Japan's military leaders have often revealed ineptitude in face of the strategy of attrition adopted by the Chinese with their methods of delayed resistance, guerilla warfare in the rear, and surprise counter-attacks. In fact, the Japanese have shown themselves incapable of actually ruling the vast areas they have occupied. In the spring of 1938 the strategy of China, a country without military traditions, showed itself to be in a far higher class than that of Japan, a country of arrogant and confident militarist imperialism. Svietshin's observations on the degeneration of Japanese militarism quoted previously have been completely confirmed by the facts. From this we can judge how much more complete will be its failure against the modern offensive and realist strategy of the Red Army. Whatever course the Sino–Japanese War may now take, the loss of substance sustained economically and militarily by Japan will remain enormous.

Now that she has launched a war again China, Japan is faced with the problem of a possible two-front war on the Asiatic mainland. In such an event her military requirements would increase tremendously, whilst the relative strength of her army would be much less and her strategic positions much more vulnerable. The Chinese Army is steadily growing. In the first half of 1938 China already had about 2 million men under arms, and in the situation which existed in the spring of that year the 600,000 Japanese then in the field were seen to be hardly sufficient even for a successful defence against such numbers. The German Press also acknowledges that the Chinese have succeeded admirably in utilising their numerical superiority over the Japanese. Referring to the strategy of Chiang Kai-Shek the military correspondent of the "*Borsen-Zeitung*" writes:

> "The numerical strength of his army gives him the possibility of superiority on almost all fronts simultaneously. He utilises this numerical superiority chiefly where he observes any withdrawal of troops to other fronts, and then he sends both regular and irregular troops after the enemy. Chiang Kai-Shek has based his campaign on the numerical superiority of the Chinese."[1]

The Chinese Army now appears to have recovered to some extent from the defeats it suffered in late autumn 1938 with the loss of Hankow and Canton, and the continuation of the war will require the major portion of Japan's trained reserves. This will fundamentally alter the relation of forces in a Soviet-Japanese war. Formerly the Japanese military authorities could at least reckon with numerical superiority over the Red Army in the Far East after the complete mobilisation of their trained reserves, but now that strong Japanese forces are being held on the Chinese front this possibility no longer exists. On the contrary, the Red Army is now certain not only of technical superiority over the Japanese, but also of numerical superiority. A two-front war would place the Japanese Army before an insoluble problem, the problem of fighting simultaneously against the overwhelming man-power potential of China and against the superior war technique of the Soviet Union.

At the same time the strategic situation of Japan on the Asiatic mainland would become untenable. The original aim of the Japanese in invading China was to secure a basis of operations against the Soviet Union and at the same time protect the hinterland for the event of war against the Soviet

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[1] In the "*Borsen-Zeitung*", Berlin, May 5th, 1938.

Union, but it is already quite obvious that they have achieved exactly the opposite. Japan's military forces on the Asiatic mainland are now almost completely surrounded in a gigantic circle from the Soviet frontier along the Amur, round Outer and Inner Mongolia, North China, and Central China to the Yellow Sea. Utter defeat against an enemy superior both numerically and technically would be inevitable under such conditions.

In addition to its superiority in modern weapons of offence, to its almost certain prospect of air mastery in the event of war, to its highly-efficient strategic railway network, and to its favourable strategic opening positions, the Red Army in the Far East can now look forward with confidence to the further deterioration of the whole political and military situation of its future enemy. It would seem therefore that all the preliminary conditions have now been fulfilled for the result prophesied by Professor Guyot:

> "In the event of war between Japan and the Soviet Union, Japan will be defeated, and she will be very rapidly defeated at that".[1]

II. THE GERMAN–JAPANESE ALLIANCE INEFFECTIVE

The German–Japanese alliance will not succeed in achieving its aim. A combination of German and Japanese forces is not sufficient to establish military superiority over the Soviet Union. The Soviet Union retains her military superiority over National Socialist Germany even after she has allotted sufficient forces to deal with a Japanese attack. She retains her military superiority over Japan even after she has concentrated by far the greater part of her military strength against National Socialist Germany. In the decisive years 1930–38 the machinery of war production worked with greater effect in the Soviet Union than in Germany and Japan together. The German–Japanese alliance is not even in a position to achieve its other aim: the division of the fighting forces of the Soviet Union in a two-front war so that the Red Army would be condemned to the defensive on both fronts or at least on one of them. On neither front will the Red Army be condemned to mere passive defence. There is no question of any tying down of badly needed forces here; the only question which arises for the Soviet Union is how best to allot her military strength to the two fronts on the basis of complete decentralisation. Germany's alliance with Japan will bring her no relief whatever in a European war, because at least four-fifths of the total military strength of the Soviet Union will be concentrated against Germany in any case. The military authorities of the Soviet Union were never in any doubt about the chief focal point in the event of a two-front war. Japan's alliance with Germany will also bring her no relief whatever because the Soviet fighting forces in the Far East have already been determined, and they are superior to the Japanese. A powerful and completely independent army is ready to deal with any Japanese attack in the Far East.

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[1] Writing in "*Vu*", November 25th, 1936, p. 1432.

The alliance also offers the allies no assistance in the matter of supplies. Regular supplies of war material can be sent only over joint frontiers or along protected sea routes. They can certainly not be sent round the world along sea routes which could be cut with the greatest of ease. The expenditure of war material in a first-class war will be so enormous that no big power can hope to satisfy its requirements by imports. Further, the assistance of German technicians in the reorganisation of the Japanese war industry would take too long to bear any fruit, and it would be plucked, if at all, too late.

The constant Japanese threat to the Far Eastern frontiers of the Soviet Union has, in the end, led to unpleasant and dangerous results for both Japan and Germany. The constant Japanese threat has stimulated the Soviet Union to become a powerful military State, has urged on her tremendous constructive efforts, and accelerated their completion. The special answer to Japanese threats was the development of the Far Eastern districts into one of the most powerful military positions in the world, and the development of the Soviet Far East into a great Asiatic power, the strongest power on land and in the air throughout Asia.

The dominance of Japan in Eastern Asia is now based, from a military standpoint, on a fiction of superiority, real at one time, real no longer, and a power which is really weak will not be able to maintain for long its hegemony over half the Asiatic continent.

CHAPTER XV

THE U.S.A., EUROPE AND THE PACIFIC

I. THE U.S.A. 1914–38

THE U.S.A. WAS the last of the big powers to enter into the world cycle of preparations for war, and her first considerable armament measures were taken only in the second half of 1937.

The politico-military situation of the U.S.A. to-day is very different from her position during the World War. At that time she had only the European theatre of war to consider, only the question of land warfare. To-day she is faced with the possibility of a war on two fronts: land warfare in Europe, and naval warfare in the Pacific, and, in fact, the real and direct sphere of operations for the U.S.A. to-day is in the Pacific and not in Europe. In the Pacific she protects and defends her own direct interests (which are being threatened by Japan), whereas in Europe she can be engaged only indirectly through Great Britain. The situation in the Pacific impels the U.S.A. towards a policy of alliance, towards the establishment of coalition relations, and she is nearer to Great Britain and the Soviet Union in the Pacific than in Europe.

The other difference to-day as compared with the situation during the World War is on the field of war technique. At the beginning of the World War war technique in the U.S.A. was rudimentary, whereas to-day U.S. war technique is already an important military factor. To-day the U.S.A. possesses all the elements of a highly-developed war technique, and she is also a first-class naval power. The problem of where, when and to what degree she will represent a decisive element in the next world war can be solved only on the basis of new information and by taking into account the international military relation of forces.

2. THE U.S.A. AND THE EUROPEAN THEATRE OF WAR

In the event of war the importance of the U.S.A. for Europe, and in particular for the Western Powers, is threefold.

In the first place, she represents the economic hinterland of Great Britain and France; she is destined to be the most important source of supply for the Western Powers for foodstuffs and raw materials. The prosecution of successful warfare by Great Britain and France is practically impossible without the economic assistance of the U.S.A. Compared with 1914–18 the importance of the U.S.A. for the Western Powers is even greater to-day owing to the fact that, first of all, material requirements are likely to be even greater in the coming world war than they were in the last, and secondly, to the circumstance that in all probability the Mediterranean will be closed to their merchantmen. As a producer of vast quantities of oil, the U.S.A. commands the chief source of the most important war material. The report that in 1937 the British Government began to store supplies of wheat and oil in the U.S.A. for the event of war (for which purpose it purchased big blocks of shares in American oil companies) sounds very credible.[1]

Further, the role of the U.S.A. as a purveyor of war materials to the Western powers may prove even more important than during the World War. At that time, and particularly up to 1917, the U.S.A. delivered very few weapons to the Western Powers; for instance, the first aeroplanes manufactured in the U.S.A. appeared on the Western front only in August 1918, whilst the first guns manufactured there did not appear until even later. At the end of the war there were 16 tanks in France which had been produced in the U.S.A.[2] In 1914–17 the U.S.A. had only very weak war industries, and they had not even mastered the then prevailing technique of war production, and she had no first-class models of her own in offensive weapons. To-day, however, the U.S. war industries are second to none in quality, and, in fact, they were the first to introduce a number of important armament types, and they hold the lead in certain fields of war production. The U.S. Army was the first to introduce light and medium types of tank, and its tanks are amongst the best in the world.

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[1] "*National-Zeitung*", Essen, January 26th, 1938.

[2] "*Wissen und Wehr*", March 1933, p. 166.

The high quality of U.S. aeroplane production is of particular importance from a military standpoint. In the years 1930–35 the U.S. aero-industry undoubtedly led the world, and the Soviet, German, British and Japanese aero-industries turned to it for instruction. Its influence was particularly important in Germany and the Soviet Union. The U.S. aero-industry manufactures the most powerful aero-engines, and it has set up world-record speeds with aeroplanes fitted with ordinary engines, and broken world-records for long-distance flights. In consequence the air arm has received new possibilities. In 1937 tests with a number of U.S. fighter planes revealed speeds of over 300 miles an hour, and one model, the Bell XFM1, is even reported to have shown a speed of 375 miles an hour. The U.S. aero-industry was the first to produce the powerfully-armed, two-engined plane, a real air cruiser with a crew of 5, carrying 6 machine-guns and a cargo of light bombs. This is approximately the same type as the French "*multiplace de combat*", but it is superior to the latter in speed, and also to the similar Dutch Fokker machine G1. The American fighter planes of 1935–36, for instance the Grumann G22, the Curtiss, the Chance-Vought V143 and the NA16 (all-purposes machine) had a speed of between 250 and 300 miles an hour, whilst the Curtiss fighters 36 and 37, and the Seversky fighter 35 had a speed of over 300 miles. And referring to U.S. medium bombers a Soviet air expert declared: "The U.S.A. beats all other capitalist powers in the production of medium bomber types.[1] Even in 1935–36 the medium American bombers Glenn-Martin, Boeing,

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[1] A. Algasin, "Aviation in Modern Warfare" (Russian), Moscow 1936, p. 104.

Douglas, and Curtiss-Wright Condor, had a speed of between 225 and 250 miles an hour, whilst the heavy Boeing bomber YB17 had a speed of 250 miles an hour. And there is no doubt whatever that the American naval air arm is the finest in the world both in quality and quantity. It was no accident that the first real military contact established between the Western powers and the U.S.A. in the spring of 1938 was the purchase of U.S. war planes.

However, the U.S. war industries had not even seriously raised the problem of mass production until the second half of 1938, and the latest German investigation declares that the U.S. war industries are characterised by:

> "A high level of military-economic potential coupled with comparatively limited economic effectives in the shape of war-industrial plant, stores, etc."[1]

In 1936 and even in 1937 the U.S. war industries were working at peace-time levels. In 1936 the U.S.A. produced 1,024 war planes. This figure lags far behind the respective productions of the Soviet Union and Germany.[2] The production of tanks amounted to no more than a few hundred a year. All this, of course, is no indication of U.S. productive possibilities in the event of war. In 1919, after the total mobilisation of her powerful industries, the U.S.A. was reported to be about to put Western Europe far in the shade with regard to war production. In that year her war industries were to have produced 2,000 guns a month and over 20,000 tanks in the year.[3] These figures give us some indication of what the U.S.A. could do in the next war. However, it is not merely a question of what supplies the Western Powers could hope for from the U.S.A. in the event of war, but of how long it would take before she could begin to supply them effectively. In the World War it took between 18 months and 2 years before she could bring her war industries to any really effective pitch, before she was able to organise mass production and master the production technique of new types of weapons. To-day the mobilisation of U.S. industry would take place under much more favourable conditions. To-day, even in peace-time, the war industries of the U.S.A. lack nothing. They produce all types of arms and their quality is on a very high technical level. Since 1936 there has existed a plan for the uniform mobilisation of industry. It provides for an exact census of material requirements, the control of the economic resources of the country, the militarisation of industry and the extension of the administrative apparatus for the carrying out of economic mobilisation.[1] At the beginning of 1938 the U.S. General Staff decided to hold an annual test mobilisation of all the factories which would be required to produce war materials, etc., in the event of war, and this mobilisation applies to 12,000 factories.[2] Both technically and organisationally therefore the preparedness of U.S. industry for war production is much greater than it was in 1917–18. As against this, though, is the fact that the production of modern heavy weapons has become more complicated and requires more time.

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[1] Gerold von Minden, "*Wirtschaftliche Mobilmachung der U.S.A.*", Hamburg 1937.

[2] "Air Service", 1937.

[3] "*Wissen und Wehr*", March 1933, p. 166.

Up to the adoption of new armament plans in the second half of 1938 the position was that at least a year would have been necessary before the U.S.A. would have been in a position to supply the Western Powers with any considerable supplies of war materials, but that in two years she would have been able to provide Great Britain and France with enormous masses of armaments.

The measures proposed, and in part already adopted, in the second half of 1938 were of considerable importance. Big new military credits are to be granted, a huge naval building programme drawn up, and armament production greatly extended. For instance, the aero-industry is to be completely reorganised for the mass production of standardised types, and the government is considering the creation of a great air fleet of between 7,000 and 9,000 war planes. If this programme is actually carried out within a comparatively short space of time, it will result not only in a big strengthening of U.S. military effectives, but also in a big increase in the productive capacity of the U.S. armament industry. In the latter event the time necessary before the U.S. could begin to supply the Western powers with arms would be considerably reduced.

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[1] "The Industrial Mobilization Plan Revised", Washington 1936.

[2] "*Borsen-Zeitung*", Berlin, January 15th, 1938.

The third, and the direct form in which the U.S.A. could influence the course of land warfare in Europe would be by the despatch of an expeditionary force as she did in 1917–18. The question now arises of the war-technical quality and the probable strength of such an American expeditionary force in the event of America's direct participation in a European war. After the World War the U.S. Army was ahead of the European armies in war technique. Even in 1924 it possessed large quantities of automatic weapons, amphibian tanks, wireless equipment for tanks and motorised artillery.[1] Since then U.S. war technique has steadily advanced, and to-day the U.S. Army is characterised by a high degree of saturation with automatic weapons and by the possession of a powerful motor park. General Lynch, the U.S. Chief of Infantry, now announces the planned introduction of a semi-automatic rifle which can take the place of a light machine-gun if necessary. Twelve regiments of U.S. infantry are fully motorised, and 16 others partly motorised.[2] In the first half of 1938 the U.S. Army was reported to have its first fully-motorised Division. It is now reported that a reorganisation of the army is to take place; divisional war strength is to be reduced to three regiments in order to make the Divisions more mobile in their operations. It is quite possible that a U.S. expeditionary corps would be ready earlier than a British to take its place with the allies on the Western front as part of the nucleus of a moto-mechanised shock army.

The other aspect of the question is that of quantity. How long would it take the U.S. to set up a mass army? We have the experience of the World War to assist us. At the beginning of September 1918 the U.S. expeditionary force on the Western front numbered approximately 1,400,000 men, of whom about a million actually saw some fighting. On November 1st, 1918, there were 181,095 officers and 3,483,444 other ranks under arms, and 2,000,000 men had already been shipped to Europe.[1] A competent American authority (Colonel Johnson of the U.S. War Department) declares that to-day American mobilisation could be accelerated. Another authority[2] declares that in four months the U.S. cadre army of 165,000 men could be increased to a mass army of 1,200,000 men.

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[1] Colonel G. Becker, "*Le modernisme americain*", Paris 1924.

[2] "Infantry Journal", February 1938.

Thus, the time necessary for the mobilisation of American industry on a war footing roughly corresponds to the time necessary for the raising of a mass army. In both cases the process will probably be accelerated in comparison with the World War. However, it is unlikely that a fully-equipped U.S. expeditionary force at full war strength could arrive at a European theatre of war before the second half of the second year of the war, or perhaps even the first half of the third year of the war, unless, of course, as has been suggested, a considerable increase takes place in the peace-time army—and takes place quickly. The fact remains, therefore, and the participation of the U.S.A. in the war will not alter it in the least, that in the first stages of a war in Europe the main weight of a defensive coalition would lie in Eastern Europe with the Red Army.

3. JAPAN AGAINST THE U.S.A.

Political conditions make Japan the destined opponent of the U.S.A. in the Pacific. The struggle for dominance between Japan and the U.S.A. will be no more than one phase in the big general struggle in the Pacific and in the Far East, but it will probably be the most important sector of naval warfare, because two great naval powers face each other here with their whole forces.

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[1] Lieutenant-Colonel de Chambrun et Capitaine de Marencher, "*L'armée américaine dans le conflit européen*", Paris 1919, pp. 19 and 243.

[2] "Coast Artillery Journal", January 1938.

After the World War Japan carried out her naval armament more actively and more effectively than any other big power. She has carefully adapted her naval building programme to the special conditions of the seas in which her fleet will have to operate, and she has developed all categories of naval strength in just the proportions she requires and in an effective strategical fashion. In 1920–38 the Japanese Navy was strengthened and modernised to a greater extent than any other, and to-day it has, amongst the navies of the world, the highest percentage of modern vessels.

All categories of ships in the Japanese Navy are of a very high technical quality. The Japanese battleships "Nagato" and "Mutsu" were the first ships in the world to carry heavy 16-inch guns, and the Japanese battle-cruiser "Kongo" is the most powerful type afloat to-day. The Japanese naval authorities have also succeeded in thoroughly modernising their battleships, which now have a higher speed than the U.S. battleships. The Japanese heavy cruisers armed with 10 8-inch guns have the strongest armour plating and the highest speed of any ships in their class, and they represent a unique combination of fire-power and mobility. The Japanese light cruisers of the 8,500-ton type are as heavily armed as the modern U.S. cruisers of the 10,000-ton type: 15 6-inch guns. And they have more torpedo tubes than their American rivals. A Soviet naval expert[1] declares that the characteristics of the Japanese light cruisers are powerful guns, heavy armour of great resistance in battle, and excellent navigational qualities. Japan has a time-factor advantage over the U.S.A. in naval construction, and therefore an advantage in quality as well. This is true in particular of the four new giant battleships now on the stocks in Japan. They are 43,000 tons and will be armed with 12 16-inch guns. They were probably begun early in 1937, whereas it was 1938 before the U.S.A. even began to think of building ships of that size. The U.S. Navy is superior to the Japanese in total tonnage, in the number of battleships (15 to 9), in the number of heavy cruisers (17 to 12), and in the number of destroyers (206 to 105), but it is by no means superior to the Japanese Navy technically, and in one important category (light cruisers) both numerical and technical superiority is on the side of Japan (22 to 14).

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[1] E. Schwede, "The Japanese Navy" (Russian), Moscow 1936, pp. 31–32.

The naval strategic situation of Japan is favourable from two points of view. First of all she has an inner line of naval operations extending from the Kurile Islands in the North to Formosa in the South. Utilising the Pescadores Islands between Formosa and the Asiatic mainland, the Japanese Navy could practically turn the East China Sea into a Japanese lake and cut the sea route between Hongkong and Shanghai. Japan has a closed sea space at her disposal which would not prove very accessible to the U.S. Navy in the event of an American–Japanese naval duel. Secondly Japan has a powerful naval strategic position facing the opposite direction and right in the middle of the Pacific. The former German islands, the Mariana, Pelew, Caroline and Marshall Islands, afford the Japanese Navy and the Japanese naval air arm innumerable bases of operations, and together with the Volcano and Bonin Islands they form an excellent barrier throughout the whole of the South-West Pacific between Australia (New Guinea) and the Japanese Empire. This powerful curtain hampers the freedom of movement of the U.S. Navy in the South-West Pacific, and cuts the American Transpacific air line which runs from San Francisco over the island of Guam and the Philippines to Hongkong. Above all, however, communications between the U.S.A. and its farthest outposts in the Pacific, Guam Island and the Philippines, are threatened. Guam and the Philippines are the only strategic positions of the U.S.A. which could form an advanced post in the South-West Pacific in the event of war with Japan.

Hector Bywater, a well-known British naval expert, declares:

"To say that Guam bears to the Philippines the same relation

> that Heligoland bore to the German Bight, or that Malta bears to the defence of British interests in the Mediterranean, would be to understate rather than exaggerate the facts of the case. We may, indeed, go further, and say that the issue of an American–Japanese war would primarily be decided by the fate of Guam."[1]

However, Guam is surrounded on all sides by Japanese islands which have been made into naval and air bases. Japan's naval defence system has thus been carried very far forward into the Pacific.

The actual naval power which the U.S.A. will be able to put forward against Japan is still uncertain because the U.S. naval building programme is continually being revised and even her naval strategic conceptions are being altered. Up to 1930 her naval construction programme was definitely conservative in tendency. Rear-Admiral Magruder, a well-known American naval expert, wrote as follows in 1938:

> "Since the war of 1812 when American frigates with their heavier guns consistently defeated British frigates, it has been the policy of the United States to arm its ships with the heaviest possible batteries. Let that policy continue and America will have peace."[2]

It is a fact that in the years 1915–30 the gunnery of the U.S. Navy was strengthened at the expense of mobility and manœuvring capacity. However, the stronger batteries have not saved the U.S.A. from the threat of an advancing Japanese Navy. Hector Bywater describes the U.S. Navy as follows:

> "It will be seen that the modern United States Navy is exceptionally strong in heavily-armed ships, and exceptionally weak in fast-cruising ships. It has a large but not excessive complement of destroyers, a limited number of ocean-going submarines, and a reserve of auxiliary vessels sufficient to cope with its requirements in home waters, but wholly inadequate to supply the bare needs of a fleet operating a great distance from its bases. It would appear, therefore, that American naval policy up to the present has been guided mainly by considerations of Atlantic and Caribbean

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[1] Hector Bywater, "Sea Power in the Pacific", Constable 1934, pp. 264–5.

[2] Rear-Admiral Magruder, "The United States Navy", Dorrance, Philadelphia 1928, p. 34.

strategy; and that very little attempt has been made to forestall the contingency of war in the Pacific, where conditions would be fundamentally different."[1]

And referring to the former one-sided insistence of American naval policy on the heavily-armed battleship (of insufficient speed), Bywater writes:

> "But while the battleship remains, in the opinion of the British Admiralty, 'the unit on which sea-power is built up', it is not the only element of naval power; and a fleet which consisted of battleships alone would be at a grave disadvantage if opposed by a fleet that included fewer battleships but had its proper quota of secondary and auxiliary vessels."[2]

Since about 1932 a certain change has taken place in U.S. naval policy, and, once ventured on, it has been pursued with vigour. Since 1937 one U.S. naval building programme has replaced the other, and each one has been more advanced than the one before it, and even now we must not consider the present plan as final. U.S. naval armament policy is being compelled willy-nilly to set as its aim the building of a battle-fleet with sufficient striking power and mobility to operate effectively in the vast areas of the Pacific and at the same time be considerably stronger than the whole Japanese Navy according to its final and maximum building programme. The achievement of this aim demands a numerical strengthening of the U.S. Navy to an extent undreamt of before, and also a revolution in quality. Let us take the question of battleships: in 1942 Japan will possess 13 battleships, and therefore the U.S.A. should have at least 18 or 20 modern battleships by then. However, in 1942 7 of her present battleships will be obsolete, and therefore between now and then the U.S.A. must build between 10 and 12 new battleships, i.e., she must exceed even Great Britain's new naval building programme. Tasks of a proportional magnitude will face her also with regard to cruisers, destroyers and submarines. According to unconfirmed reports from Washington, the U.S. Naval Department has decided to build between 10 and 15 of the new 10,000-ton cruisers alone.

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[1] Hector Bywater, "Sea Power in the Pacific", Constable, London 1934, p. 129.

[2] Ibid., p. 117.

In addition there is the question of improved quality. All the newly-built ships will be capable of operating in the Western Pacific at a great distance from their bases. For this reason a powerful fleet of auxiliary vessels is to be built to enable the U.S. Navy to operate on the other side of the Pacific and to emancipate it from naval bases. At the beginning of January 1938 orders were placed for the building of 12 16,000-ton oil tankers with deck armour, munition chambers, etc. It is doubtful whether the productive capacity of the U.S. ship-building yards is sufficient to cope with such a huge naval construction programme. From now on the U.S. Navy must be regarded as a dynamic and rapidly changing magnitude.

The U.S.A. will undoubtedly seek to adapt her naval strategic situation to her naval building programme. The naval strategic situation of the U.S.A. in the Pacific is primarily suited for defensive purposes. The most important air and naval bases in the Pacific are Dutch Harbour on the Aleutian Islands, and the powerfully fortified Pearl Harbour on the Hawaii Islands, which are both over 3,750 miles away from Japan. For this reason the organ of the German War Ministry observes with some satisfaction:

> "Unfavourable geographical conditions from a military and naval standpoint, and the very considerable risk involved in any belligerent operations suggest a policy of amicable understanding for the U.S.A. in the Far East."[1]

However, the U.S.A. possesses valuable elements of an advanced base of operations against Japan in the Pacific, although at the moment they are scattered and incomplete. On the one hand there are the points lying in the South-West Pacific along the U.S. Transpacific air line: from the Hawaii Islands to Midway Island, Wake Island, and Guam Island on to the Philippines. The island of Guam is about 1,780 miles from the Philippines, and it is only 250 miles from the Philippines to Formosa, the big Japanese possession in the extreme South-West. On the other hand, to the far North there is the island of Kiska, the farthest West of the Aleutian Islands, which is only 687 miles from the nearest Japanese possession. However, these positions can be of real use to the U.S. Navy only after they have been thoroughly fortified and developed. The fortification of advanced strategic positions in the Pacific is part and parcel of the new dynamic naval programme of the U.S.A. The difficulty for U.S. naval strategy is that it must consider not only the possibility of attacking from these outlying naval positions, but also the possibility of having to defend them against powerful enemy attacks. These bases give the U.S.A. potential flank positions against the extreme North and South positions of Japan, and they also give her a link with the fortified coastal districts of the Soviet Union in the North and with the British positions in the South of the West Pacific. The Aleutian Islands form a bridge to Petropavlovsk on the peninsula of Kamchatka. Formosa is at the tail of the Anglo–French–Dutch defensive line round the South China Sea, whose strongest points are Hongkong and Singapore. There is a certain parity of naval strength between the U.S.A. and Japan in the Pacific. Both powers have powerful defensive positions, and both of them will be faced with very considerable difficulties if they undertake a naval offensive. An isolated Japanese–American naval war would therefore be a protracted one under all circumstances. For both belligerents the launching of a naval offensive would involve great efforts and great risks.

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[1] Colonel von Bülow, "*Luftpolitik und Luftkriegführung im Stillen Ocean*" in the "*Militärwissenschaftliche-Rundschau*", September 1937, p. 693.

4. AN ANTI-JAPANESE COALITION IN THE PACIFIC

However, an isolated Japanese–American war is a theoretical abstraction. It may be theoretically possible that the U.S.A. would keep out of a war in the Pacific, but it is quite impossible that if she were involved in a war with

Japan, the Soviet Union and the Western Powers would remain aloof for long. Any naval war carried on by the U.S.A. in the Pacific must necessarily develop into a coalition war against Japan.

For the U.S.A., just as for the Western Powers, and above all for Great Britain, and in her train France, Holland and Australia, but also for the Soviet Union, there exists an absolute compulsion in the Pacific for the formation of an all-embracing coalition against Japan. This compulsion is created by military, geographical and political conditions.

The importance of the U.S.A. in such an anti-Japanese coalition is that she is the one big power which could, under certain circumstances, defeat Japan at sea. No other power could do this, and no coalition of powers in which the U.S.A. was not a member, for instance a purely Soviet–Franco–British coalition. From this it follows logically that neither the Soviet Union nor the Western Powers could leave the U.S.A. in the lurch once she took up the struggle against Japan. If they did they would lose the one and only chance of breaking the naval power of an enemy who threatens them all.

On the other hand, the U.S.A. urgently needs a naval coalition against Japan, because at the moment her navy has not the necessary numerical superiority or the necessary technical and strategic qualities of speed and manœuvre to guarantee her the victory over Japan if she fights alone. Above all, she has not the requisite advanced base of operations for waging naval warfare. All she has at the moment are scattered and weak (because insufficiently fortified and developed) elements of such a base of operations in the Aleutian Islands and the Philippines. And in the best case, these two positions are separated from each other by almost 10,000 miles and they can threaten only Japan's flanks and not her important naval bases and coasts. If the U.S.A. becomes involved in war with Japan without support from other countries she will be condemned in the beginning at least to following a defensive strategy, and Bywater even speaks of an inevitable preliminary setback for the U.S.A.

Only after pursuing tactics of naval attrition in a protracted war would the U.S.A. gradually and carefully be able to proceed to offensive operations.

The joint work of two qualified naval and military experts of the old Tsarist Army, written some years ago, gives the following verdict on the strength of the U.S.A. in the Pacific:

> "The strategic conditions which have been created in the Pacific do not give the U.S.A. the possibility of defending her possessions in the Far East and her interests in China by the strength of her own weapons alone."[1]

This is still true to-day.

Let us examine carefully the possibilities and the strength of the naval powers who are destined to join a Pacific defensive coalition. The main weight of any such coalition would not lie in an Anglo-Saxon combination. An Anglo-American naval coalition would not be in a position to defeat Japanese naval power quickly. The naval forces and the naval bases of Great Britain in the Far East are not strong enough to give the U.S.A. the superiority she lacks over Japan. British naval forces in the Far East are too weak, and her naval bases are too far removed from the decisive scene of operations, for that. Bywater writes as follows on Great Britain's position in the Pacific:

> "Strategically our position has deteriorated to an alarming extent. Unpalatable though it may be, the truth is that we are not at the present time in a position to defend our widespread and priceless interests in the Pacfic. During the past thirteen years our naval strength in that ocean has shrunk almost to insignificance, and there is no immediate prospect of restoring it."[2]

An alliance with the U.S.A. in the Pacific is in itself not sufficient to give Great Britain any guarantee of a rapid and decisive victory in a war with Japan because of the previously mentioned difficulties in the way of any American naval offensive. Golovin and Bubnoff write as follows on the point:

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[1] Golovin and Bubnoff, "The Pacific Problem in the Twentieth Century" (Russian), Prague 1924, p. 202.

[2] Hector Bywater, "Sea Power in the Pacific", Constable, London 1934, pp. 17–18.

"American participation would not give the combined Anglo-American fleet any decisive and powerful strategical opportunities for waging war against Japan."[1]

As a member of a big anti-Japanese coalition in the Pacific Great Britain would have both weak and strong sides. Her fleet in Pacific waters is absolutely inadequate; it has no battleships and only 6 cruisers, and it is of no use for a naval offensive against Japan, whilst her naval bases in the Pacific are of limited strategical importance, because they threaten Japan's positions from the South only, and even then from a great distance, so that their chief significance must remain defensive. Hongkong, the Northernmost British naval base in the Far East, is over 1,500 miles away from the nearest important Japanese harbour, Nagasaki.

However, in the South-West Pacific Great Britain has strong positions. The system of British naval fortifications Hongking–Singapore–Brunei (Borneo) to Port Darwin in Australia cuts off Japanese waters from the South and guarantees a defensive coalition the strategic superiority on the Southern flank of the enormous area of naval operations in the Far East. A hermetic naval blockade of Japan could be carried out from the South. Further, it would be Great Britain's task to establish and lead a broad, so-to-speak regional, coalition against Japan in this area. This is the area in which connections could be established between British naval forces and British naval bases on the one hand, and the defensive forces of France, Holland and Australia on the other. Each of these powers is weak in the South Pacific. Speaking of the French forces there, a French expert[2] declares that they must be considered as prestige factors rather than real power factors. And a second French expert[3] declares that it perfectly obvious that neither France nor Holland could defend her Far Eastern possessions against a Japanese attack if she remained alone in the struggle. These countries too are compelled by circumstances to seek a Pacific coalition. Acting in co-operation with Great Britain, however, they could form an alliance whose forces would be of some weight in the scales. Such a coalition under British leadership could put 15 cruisers and between 30 and 40 destroyers and about as many submarines into action against Japan. Dutch possessions in the East Indies are also being fortified. These co-ordinated preparations for joint defence in the South Pacific, taken in conjunction with the armament measures of the Soviet Union and of the U.S.A., threaten Japan with political encirclement. A prominent German newspaper writes as follows on the point:

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[1] Golovin and Bubnoff, "The Pacific Problem in the Twentieth Century", (Russian), Prague 1924, p. 232.

[2] A. Thomazi in the "*Figaro*", December 24th, 1937.

[3] R. Maine in the "*Paris-Soir*", January 14th, 1938.

> "Where formerly there was an empty space (in the South Pacific) in which a strong power could do as it liked without meeting with resistance, we now observe a ring of States rapidly engaged in arming themselves and fortifying their positions, and all moved by the joint interest of defending their possessions and their spheres of influence."[1]

This block under British leadership could be of considerable assistance to the U.S.A. because the Philippines could also be linked up in its defensive system. However, even this South Pacific coalition under British leadership would not be in a position to increase the offensive strength of the U.S. Navy to any appreciable extent.

5. THE POSSIBILITIES OF A RUSSO-AMERICAN COALITION

The most important strategic ally for the U.S.A. in the Pacific would be the Soviet Union, and therefore the main weight of any defensive coalition would lie in a Russo-American alliance. Far-seeing experts recognised the importance of such an alliance years ago. In 1924 Golovin and Bubnoff declared:

> "The U.S.A. could defeat Japan only with the assistance of a strong Russia."[2]

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[1] "*Börsen-Zeitung*", Berlin, May 21st, 1937.

[2] Golovin and Bubnoff, "The Pacific Problem in the Twentieth Century" (Russian), Prague 1924, p. 250.

And Hector Bywater says the same thing in different words:

> "One entirely new factor has to be taken into consideration in every survey of politico-naval affairs in the Pacific. That factor is Russia. It is true that Russia's naval forces are for the time being negligible, but thanks to her as yet unmeasured military power and her geographical assets, e.g. the possession of Vladivostock, Russia would be a most valuable ally for any power at war, or contemplating war, with Japan. It is in this fact that many observers discern the true significance of the recent *rapprochement* between Washington and Moscow."[1]

Since Bywater wrote these words the importance of the Soviet Union as a possible ally of the U.S.A. has still further increased.

The Soviet Union could provide the U.S.A. with fourfold support in the event of war with Japan. First of all, the superiority of the Soviet Union over Japan on land would benefit the U.S.A. In a land war with the Soviet Union, Japan would inevitably lose her whole basis on the Asiatic mainland, and with this the conditions under which she would have to wage naval warfare would greatly deteriorate and the possibility of a full naval blockade would arise. It is quite possible that Japan's defeat on land would precede her defeat at sea, and it is very doubtful whether a country defeated on land could summon up the inner forces necessary for a war at sea. A rapid and victorious offensive by the Far Eastern Red Army might easily save the U.S.A. the tremendous exertion of naval warfare.

Secondly, the Soviet Union could provide the U.S.A. with the one decisive element she lacks for naval warfare against Japan, namely an advanced base of operations. The Soviet Union, one might say, has the political monopoly of all the naval *points d'appui* which lie near the Japanese coasts. Vladivostock is a first-class naval harbour and a powerful naval fortress. It lies only 500 miles from the Japanese coast, and only 680 odd miles from Tokyo. The advantage of Japan's naval strategic position would be lost if the U.S. Navy appeared in the Bay of Vladivostock. However, the Soviet Union possesses not only Vladivostock. To the North of Vladivostock over Nikolaievsk on the Amur to Petropavlovsk on Kamchatka runs a long line of naval strong points which cover the whole of Central and North Japan. The use of bases so near Japan's vital centres by the U.S. Navy would mean a strategic revaluation of U.S. naval power. Only under such conditions could the U.S. Navy be utilised to the full and develop its power most effectively.

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[1] Hector Bywater, "Sea Power in the Pacific", Constable, London 1934, p. 20.

Thirdly, the naval forces of the Soviet Union could supplement very effectively the U.S. naval forces intended for use against Japan. A coalition fleet could be set up in Japanese waters with the U.S.A. providing the battleships and cruisers, and the Soviet Union the lighter craft: submarines, destroyers and torpedo boats. The Soviet Union could provide a greater number of light craft than the U.S.A. could possibly send over the Pacific for operations against Japan. The Soviet submarine fleet would be of particular importance, and it has between 60 and 70 submarines in the Pacific. In war its task would be to defend the Soviet coasts, and, in a coalition war against Japan, this would mean the defence of the U.S. base of operations. Further, the Soviet submarine fleet would play a decisive role in any naval blockade of Japan. A Russian naval officer of the old school now living abroad writes as follows on this point:

> "The Soviet Union has 151 submarines in four seas, and she could easily concentrate a fleet of 100 submarines and more in the Pacific. The presence of such a submarine fleet operating from powerfully fortified bases (Vladivostock, Nikolaievsk on the Amur, and Petropavlovsk on Kamchatka) coupled with a powerful air force renders any serious Japanese naval operations against Russia's coasts unthinkable, and landing operations absolutely impossible. However, apart from defending the coasts the Soviet submarine fleet could carry out very effective operations on all Japanese sea routes. It could even establish a blockade of Japan. And if a few score American submarines were added to the Soviet submarine fleet, then the blockade of Japan's coasts would take on such a threatening form that Japan would be compelled to withdraw."[1]

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[1] Frigate-Captain Lukin in an article entitled "On the Events in China", published in the Paris Russian newspaper "*Posledni Novosti*" in December 1937.

In a coalition naval war against Japan therefore the light craft of the Soviet Union could turn the scales against her.

And finally, the powerful air force of the Soviet Union would be a very important factor indeed in a coalition war in the Far East. Its use in co-operation with the American naval air arm, the strongest and best in the world, would threaten the Japanese Navy and the military and economic centres of Japan, and still further alter the situation to Japan's disadvantage in naval warfare. Bywater declares that the technical progress of military aviation has weakened the strategic situation of Japan, first of all on account of the technical backwardness of the Japanese Air Force, and secondly because of the peculiar vulnerability of Japan to air attack. In his book he quotes the following statement of Nakamura, which clearly reveals the anxiety the Japanese authorities feel in this connection:

> "Many of our great commercial and naval harbours would be open to attack, and the enemy, being well informed as to our resources, would know in what direction to concentrate his efforts. On the Pacific coast, the capital of Tokyo, the huge entrepôt of Yokohama, and the naval arsenal of Yokosukka would lie open to the visitations of hostile flying machines. Osaka, the heart of our national industry, would not be beyond an enemy's reach, and the swarming industrial hives of Kuyshu would present him with innumerable targets."[1]

The leading German authority on air warfare expresses the same opinion:

> "The danger to Japan from the air is growing ceaselessly. The development of the air weapon has put Japan into the same position as Great Britain: naval power can no longer protect her against enemy attack. Although the Soviet air force is well over 600 miles away it represents a greater danger to Japan than the whole U.S. Navy."[2]

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[1] Quoted in Hector Bywater's book, "Sea Power in the Pacific", Constable. London 1934, pp. 305–6.

[2] Colonel von Bulow, "*Luftpolitik und Luftkriegfuhrung im Stillen Ocean*" in the "*Militärwissenschaftliche Rundschau*", Vol. VI, 1937, p. 817.

The combined Soviet–American air arms could be sent into action against Japan from the Soviet coastal districts and from U.S. aircraft-carriers. They could establish air mastery over Japanese waters. This would greatly improve the situation for the U.S. naval forces operating against Japan.

Thanks to her land forces, her naval bases, her light naval craft and her air arm, the Soviet Union could offer the U.S.A. more effective assistance as an ally than any other power. And that the U.S.A. recognises this fact is indicated by the technical assistance she is giving the Soviet Union in the creation of a powerful high seas fleet, and in particular in the building of modern battleships, and by the obvious trend of U.S. naval strategy towards the North rather than towards the South Pacific, by the development of the Aleutian Islands rather than the Philippines, by a tendency to join up with the Soviet base of operations rather than with the British, with Vladivostock rather than Hongkong.

The "*Isvestia*" writes:

> "The Northern sector of the Pacific is of greater importance for American naval strategy to-day, namely the triangle formed by the Pacific coast of the U.S.A., the Hawaii Islands and the Aleutian Islands."[1]

This sector is the sea route to Vladivostock from the North, and it is here that the big American naval manœuvres have taken place since 1935.

The alliance of the U.S.A. with the Soviet Union and with Great Britain would alter the original relative naval parity between the U.S.A. and Japan in the Pacific to the advantage of the U.S.A. By means of such an alliance the U.S.A. could proceed from the defensive to the offensive, from a strategy of naval attrition to a strategy of naval annihilation.

Ten years ago an American expert observed with obvious anxiety that Japan combined the military power of Hohenzollern Germany with the naval power of Great Britain and the splendid naval isolation of the U.S.A.[2] However, since then the military rise of the Soviet Union in the Far East, the general preparations for defence in the Pacific, and the development of a great anti-Japanese defence coalition have deprived Japan of these alleged trumps. Like Japan's military hegemony on the Asiatic mainland, Japan's naval hegemony in the Western Pacific cannot last long.

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[1] "*Isvestia*", Moscow, June 11th, 1937.

[2] Lieutenant-Colonel Jefferson Davis, "Japan, the Air Menace of the Pacific," New York 1928, p. 24.